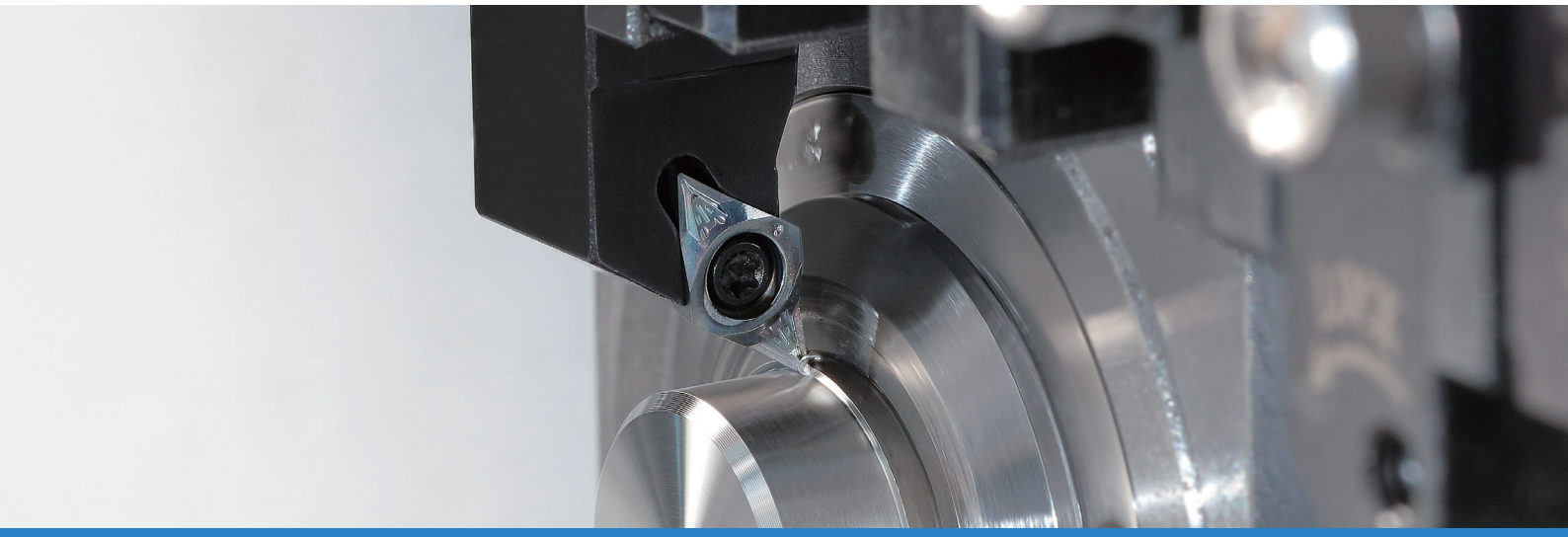
THE NEW VALUE FRONTIER

KYOCERA

New PVD Coating | PR1725/PR1705

New PVD Coating

PR1725/PR1705 NEW



Excellent Surface Finish and Long Tool Life

Newly Developed PVD Coating MEGACOAT NANO PLUS

PR1725

Great for Machining Steel and other Materials
Wide Range of Machining Applications with Various Chipbreakers Available

PR1705

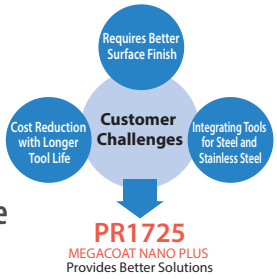
Excellent Wear Resistance and
High Precision Machining of Free-cutting Steel

NEW For Finishing **SKS** Chipbreaker

New PVD Coating

PR1725

1st Recommendation for Steel Machining. Excellent Surface Finish and Long Tool Life
Great Performance in Small Parts Machining Applications

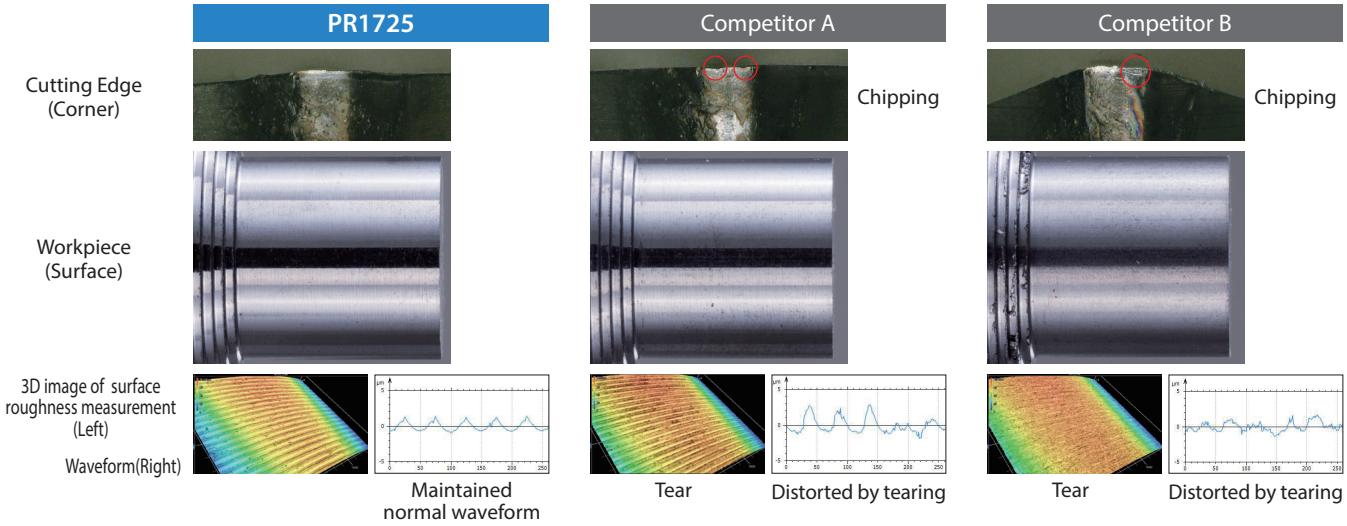


1 MEGACOAT NANO PLUS Maintains Long Tool Life and Excellent Surface Finish

Long tool life leads to improved cycle time

Excellent surface finish with no tearing lowers quality control costs

Insert cutting edge wear and quality of surface finish comparison (S45C) * After 20 min of machining (Internal evaluation)



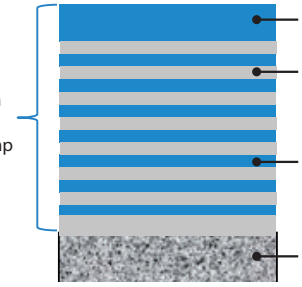
Good surface condition

Cutting Conditions : Vc = 150 m/min, ap = 0.5 mm, f = 0.05 mm/rev, Wet Workpiece : S45C

MEGACOAT NANO PLUS

AlTiN/AlCrN Nano laminated film with superior wear resistance and adhesion resistance. Excellent surface finish and long tool life

<Reduces cracking>
Reduces abnormal damages such as chipping because of increased lamination layer with a thinner gap than conventional coatings



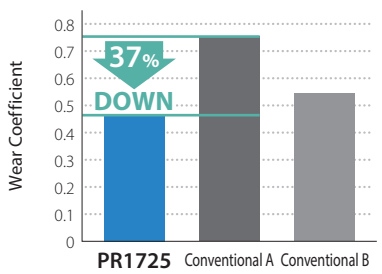
High-lubricity unique surface layer

High aluminum content **AlTiN layer**
High hardness / Oxidation resistance

Optimized **AlCrN layer**
Superior adhesion resistance

Tough micro-grain carbide substrate
High stability

Wear Coefficient Comparison (Internal evaluation)



Superior Wear and Chipping Resistance

High hardness with nano laminated film layer properties
Internal stress optimization reduces chipping

Excellent Surface Finish

Special surface layer with great lubricity reduces adhesion

Applicable to various workpiece materials

Excellent oxidation resistance. Superior high temperature properties maintains good performance in steel, stainless steel and free-cutting steel

High machining stability

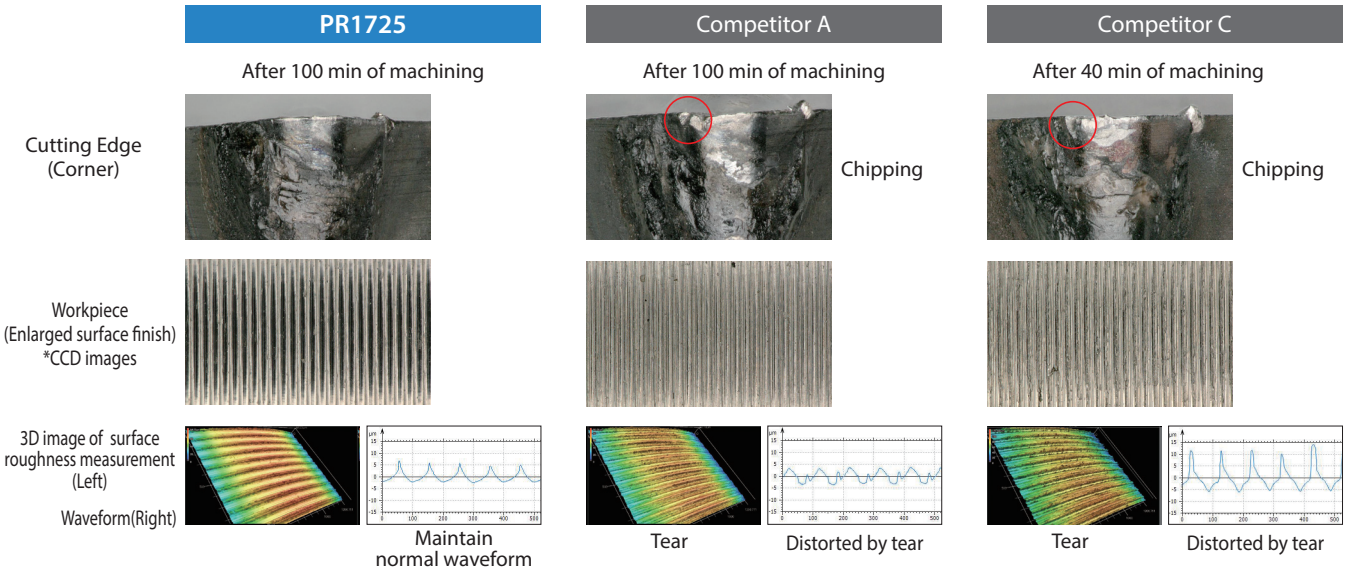
Tough micro-grain carbide substrate provides stable machining

2 One solution can be used in various workpiece materials

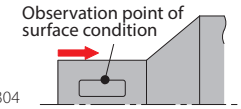
Long tool life for steel, stainless steel and free-cutting steel

Improved management of tools cut the cost

Wear on the cutting edge of insert and quality of the surface finish comparison (Stainless steel:SUS304)



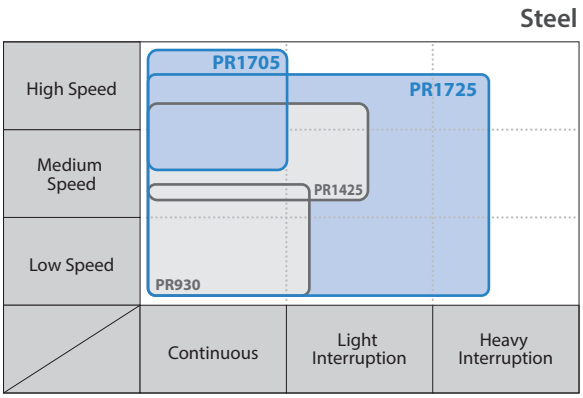
PR1725 shows less damage on the cutting edge and maintains stable tool mark on the workpiece surface



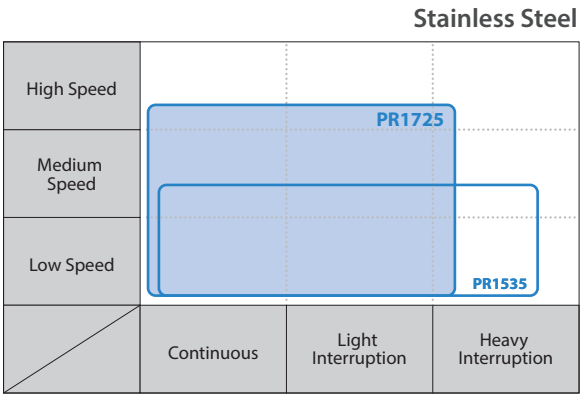
Cutting Conditions : Vc = 150 m/min, ap = 0.5 mm, f = 0.1 mm/rev, Wet Workpiece : SUS304

3 Applicable to a Wide Range of Machining Applications

Good performance in both steel and stainless steel from low to high speed machining



PR1725 : 1st Recommendation for steel machining
PR1705 : 1st Recommendation free-cutting steel

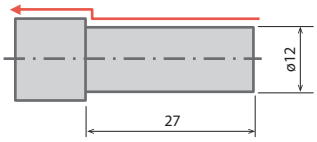


PR1725 : For general purpose high-speed machining
PR1535 : 1st Recommendation for stainless steel machining
Long tool life and high quality machining

Case Studies

Shaft SCM435

Vc = 110 m/min
ap = ~1.5 mm
f = 0.06 mm/rev
Wet
DCGT11T302MFP-SK PR1725



Tool Life

PR1725 SK Chipbreaker 3,000 pcs/edge

Tool Life x2

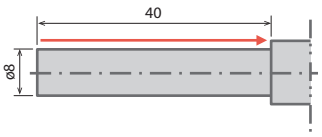
Competitor D (Molded Chipbreaker) 1,500 pcs/edge

PR1725 SK chipbreaker showed 2 times longer tool life when compared to competitor D

(User Evaluation)

Shaft SCM440H

Vc = 70 m/min
ap = 1.0 mm
f = 0.05 mm/rev
Wet
DCGT11T302MFP-SK PR1725



Tool Life

PR1725 SK Chipbreaker 250 pcs/edge

Tool Life x1.6

Competitor E (Molded Chipbreaker) 150 pcs/edge

PR1725 SK chipbreaker showed 1.6 times longer tool life when compared to competitor E

(User Evaluation)

Shaft S35C

Vc = 90 m/min
ap = 0.3mm
f = 0.1 mm/rev
Wet
DCGT11T302MFP-SK PR1725

Tool Life

PR1725 SK Chipbreaker 300 pcs/edge

Tool Life x1.5

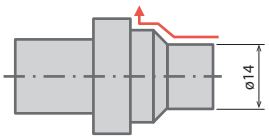
Competitor F (Molded Chipbreaker) 200 pcs/edge

PR1725 SK chipbreaker showed 1.5 times longer tool life when compared to competitor F

(User Evaluation)

Pin SCM420

Vc = 110 m/min
ap = 0.2~0.7 mm
f = 0.07 mm/rev
Wet
DCGT11T302MFP-GQ PR1725



Tool Life

PR1725 GQ Chipbreaker 200 pcs/edge

Tool Life x1.3

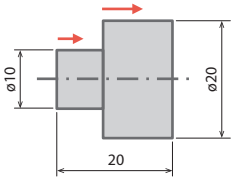
Competitor G (Molded Chipbreaker) 150 pcs/edge

PR1725 GQ chipbreaker showed 1.3 times longer tool life when compared to competitor G

(User Evaluation)

Shaft SUS420J2

Vc = 50 m/min
ap = 0.1 mm
f = 0.05 mm/rev
Wet
DCGT11T302MFP-GQ PR1725



Tool Life

PR1725 GQ Chipbreaker 600 pcs/edge

Tool Life x2

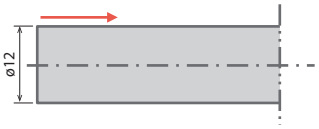
Competitor H (Molded Chipbreaker) 300 pcs/edge

PR1725 GQ chipbreaker showed 2 times longer tool life when compared to competitor H

(User Evaluation)

Shaft SUM

Vc = 110 m/min
ap = ~2.0 mm
f = 0.05 mm/rev
Wet
CCET09T304MFR-J PR1725



Tool Life

PR1725 J Chipbreaker 3,000 pcs/edge

Tool Life x3

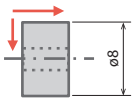
Competitor I (Molded Chipbreaker) 1,000 pcs/edge

PR1725 J chipbreaker showed 3 times longer tool life when compared to competitor I

(User Evaluation)

Shaft S45C

Vc = 100 m/min
ap = 0.1 mm
f = 0.025 mm/rev
Wet
DCGT11T302MFP-GF PR1725



Tool Life

PR1725 GF Chipbreaker 3,000 pcs/edge

Tool Life x2

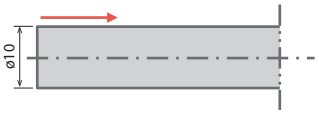
Competitor J (Molded Chipbreaker) 1,500 pcs/edge

PR1725 GF chipbreaker showed 2 times longer tool life when compared to competitor J

(User Evaluation)

Pin SKS

Vc = 110 m/min
ap = 0.2 mm
f = 0.05 mm/rev
Wet
DCGT11T302MFP-SK PR1725



PR1725 SK chipbreaker showed good surface finish and accuracy after machining same number of workpieces as the conventional C

(User Evaluation)

New PVD Coating

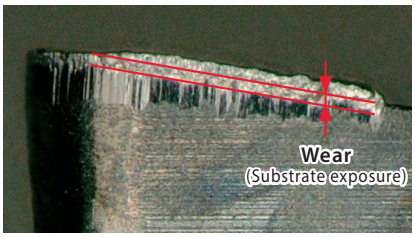
PR1705

High-hardness ultrafine particle carbide substrates with MEGACOAT NANO PLUS offer excellent wear resistance and high precision machining

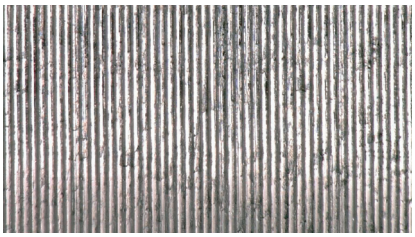
Insert Wear and Surface Finish Comparison (SUM23) * After 40 min of machining (Internal evaluation)

PR1705

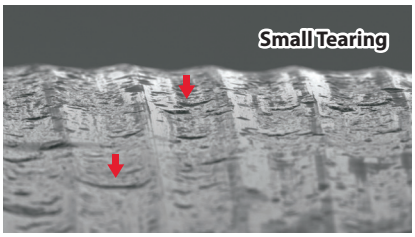
Cutting Edge (Flank Face)



Workpiece *CCD image



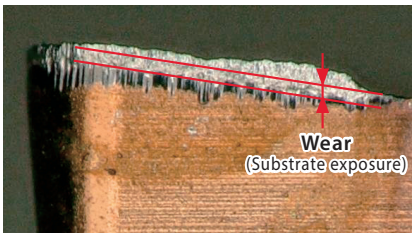
Tearing on Workpiece (Surface Finish Enlarged)



Good surface finish

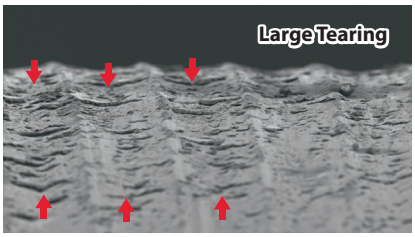
Competitor K

Cutting Edge (Flank Face)



Workpiece *CCD image

Tearing on Workpiece (Surface Finish Enlarged)

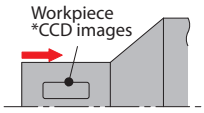


Poor surface finish

PR1705 showed little adhesion to the cutting edge and good surface finish on the workpiece without tearing

Cutting Conditions : Vc = 150 m/min, ap = 0.5 mm, f = 0.05 mm/rev, Wet Workpiece : SUM23

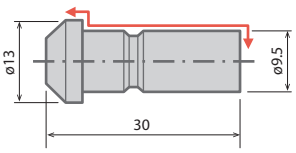
PR1705 improved tool life in continuous machining for steel and electromagnetic soft iron *For more stable machining, use PR1725



Case Studies

Pin SUM24L

Vc = 200 m/min
ap = 0.12 mm
f = 0.04 mm/rev
Wet
CCGT09T301MF PR1705



Tool Life

PR1705 MF Chipbreaker **4,800 pcs/edge** Tool Life x1.5

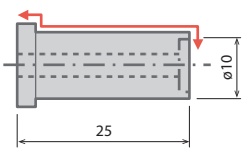
Competitor L (Ground chipbreaker) **3,200 pcs/edge**

PR1705 MF chipbreaker showed 1.5 times longer tool life when compared to competitor L

(User Evaluation)

Shaft SUM24L

Vc = 100 m/min
ap = 1.4 mm
f = 0.05 mm/rev
Wet
DCGT11T302MFR-J PR1705



Tool Life

PR1705 J Chipbreaker **5,800 pcs/edge** Tool Life Approx. x1.4

Competitor M (Ground chipbreaker) **4,000 pcs/edge**

PR1705 J chipbreaker showed 1.5 times longer tool life when compared to competitor M

(User Evaluation)

Molded Chipbreaker Series for Small Parts Machining

Molded Sharp Edge Chipbreaker

Extensive lineup to solve various chip control issues
Utilizing PR1725 and PR1705 provides stable machining and extended tool life

1 **Excellent Chip Control in a Wide Range of Machining Applications**

2 **High-Precision Sharp Edge with Periphery Grinding**

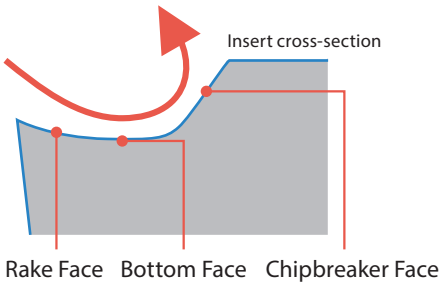
3 **Anti-welding Properties for Improved Mirror Surface Finish**

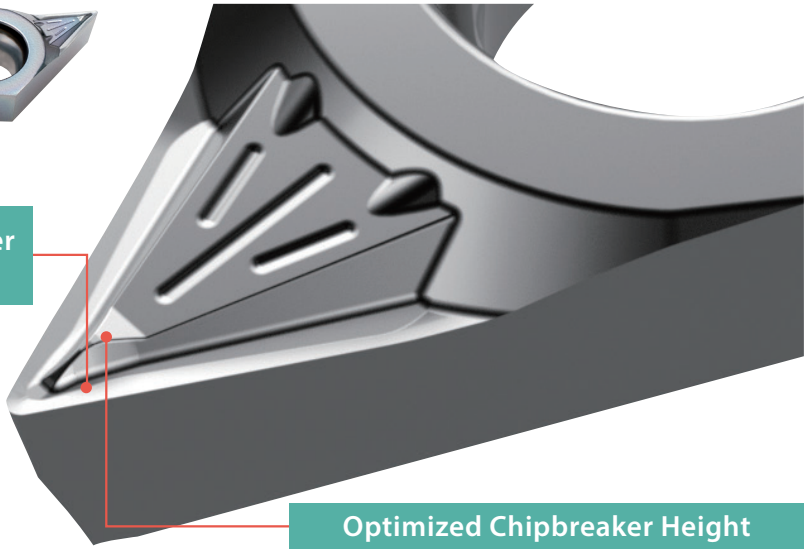
1st Recommendation for Finishing

SKS Chipbreaker NEW

ap: 0.2 to 1.5 mm
Excellent Chip Control with Good Surface Finish

Rake face, bottom face, and chipbreaker face ensure properly curled chips



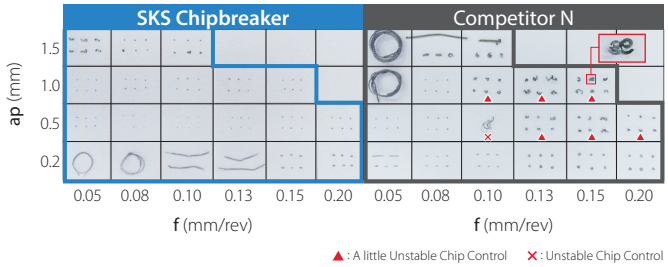


Optimized Chipbreaker Height

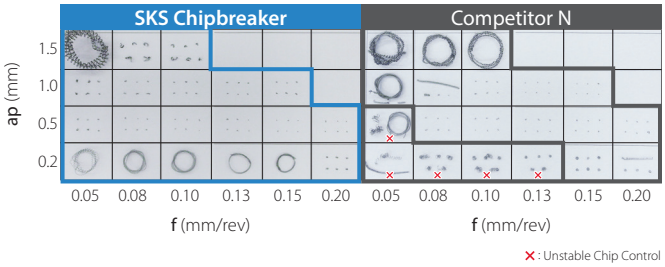
Stabilized chip control when machining at high feed rates
Improved chip evacuation when machining at large D.O.C.

Chip Control Comparison (Internal evaluation)

S45C



SUS304



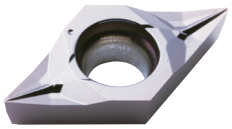
Cutting Conditions : Vc = 100 m/min, Wet, DCGT11T302 Type

SKS chipbreaker showed greater chip control when compared to competitor N

1st Recommendation for Semi-finishing

SK Chipbreaker

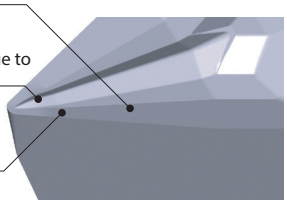
ap: 0.5 to 3.0 mm
The molded chipbreaker maintains both sharpness and chip control



Stable chip evacuation in large D.O.C. due to large rake angle

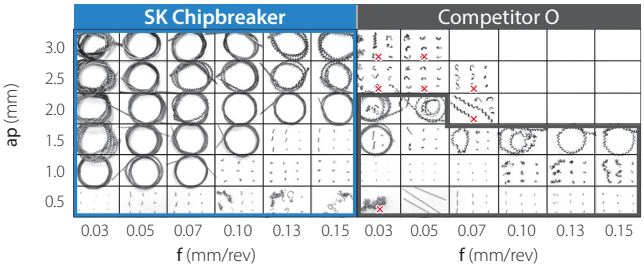
Chip control is improved in small depths of cut due to chipbreaker projecting out to the corner tip

Cutting force is reduced as the cutting edge is lowered towards the center of the workpiece



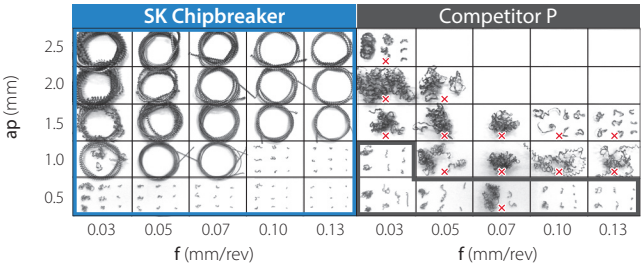
Chip Control Comparison (Internal evaluation)

S45C



× : Unstable Chip Control

SUS304



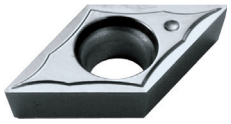
× : Unstable Chip Control

Cutting Conditions : Vc = 100 m/min, Wet, DCGT11T302 Type

Complementary Chipbreakers (Chip Control Oriented)

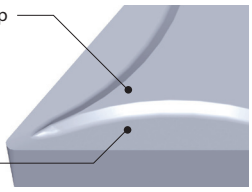
GQ Chipbreaker for Small to Large ap

ap: 0.8 to 5.0 mm (Steel)
0.8 to 3.0 mm (Stainless Steel)
For a Wide Range of Applications



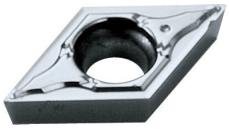
Low cutting force design with a small chipbreaker step
Good chip control in small depths of cut with the breaker dot projecting out to the cutting edge

Wide range of acceptable chips is achieved by using an advanced chipbreaker design



GF Chipbreaker for Finishing

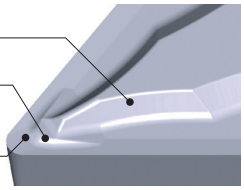
ap: 0.25 to 1.25 mm
Controlled Chips during Finishing



High slope recedes away from the cutting edge
⇒ Minimizes chip clogging in large D.O.C.

Improved sharpness with large rake angle

Chipbreaker dot extends out to the cutting edge
⇒ Divides the chips into smaller pieces

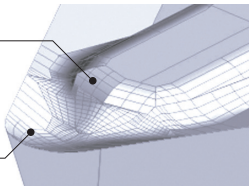


CF Chipbreaker for Minute ap

ap: 0.02 to 0.2 mm
Excellent Chip Formation in Minute ap

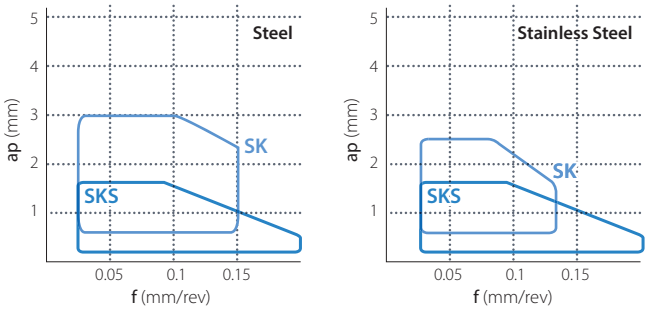
Properly curled chips with special dot design

Large rake angle improves sharpness
Suppresses burr formation and clouding of the workpiece by preventing welding onto the insert

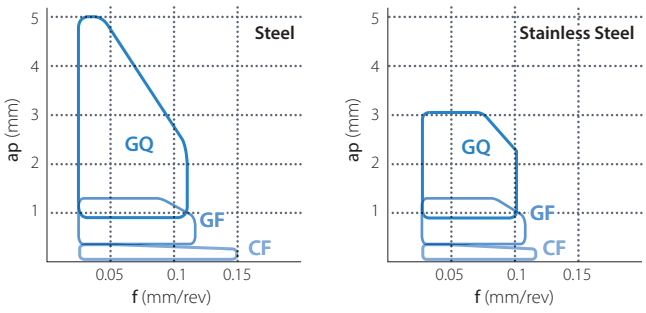


Chipbreaker Map

1st Recommendation for Finishing (Low Cutting Force)



Complementary Chipbreakers (Chip Control Oriented)



Stock Items (Positive)

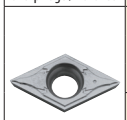
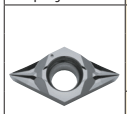
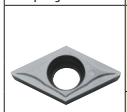
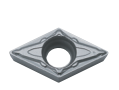
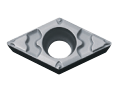
Shape	Description	Dimensions (mm)					MEGACOAT NANO PLUS		MEGA COAT NANO
		I.C.	Thickness	Hole	Corner-R (RE)	Relief Angel	PR1725	PR1705	PR1535
 Minute DOC / Sharp Edge / Polished	CCGT 030101MP-CF	3.5	1.4	1.9	< 0.1	7°	●	●	●
	030102MP-CF				< 0.2		●	●	●
	CCGT 040101MP-CF	4.3	1.8	2.3	< 0.1	7°	●	●	●
	040102MP-CF				< 0.2		●	●	●
 Finishing / Sharp Edge / Polished	CCGT 030101MFP-PF	3.5	1.4	1.9	< 0.1	7°	●		●
	030102MFP-PF				< 0.2		●		●
	CCGT 040101MFP-PF	4.3	1.8	2.3	< 0.1	7°	●		●
	040102MFP-PF				< 0.2		●		●
	CCGT 060201MFP-PF	6.35	2.38	2.8	< 0.1	7°	●		●
	060202MFP-PF				< 0.2		●		●
	060204MFP-PF				< 0.4		●		●
 Finishing / Sharp Edge / Polished	CCGT 060201MFP-GF	6.35	2.38	2.8	< 0.1	7°	●	●	●
	060202MFP-GF				< 0.2		●	●	●
	060204MFP-GF				< 0.4		●	●	●
	CCGT 09T301MFP-GF	9.525	3.97	4.4	< 0.1	7°	●	●	●
	09T302MFP-GF				< 0.2		●	●	●
	09T304MFP-GF				< 0.4		●	●	●
 Finishing / Sharp Edge / Polished	CCGT 0602005MFP-SKS	6.35	2.38	2.8	< 0.05	7°	●	●	●
	060201MFP-SKS				< 0.1		●	●	●
	060202MFP-SKS				< 0.2		●	●	●
	CCGT 09T3005MFP-SKS	9.525	3.97	4.4	< 0.05	7°	●	●	●
	09T301MFP-SKS				< 0.1		●	●	●
	09T302MFP-SKS				< 0.2		●	●	●
	09T304MFP-SKS				< 0.4		●	●	●
 Semi-finishing/ Sharp Edge / Polished	CCGT 060201MFP-SK	6.35	2.38	2.8	< 0.1	7°	●	●	●
	060202MFP-SK				< 0.2		●	●	●
	060204MFP-SK				< 0.4		●	●	●
	CCGT 09T301MFP-SK	9.525	3.97	4.4	< 0.1	7°	●	●	●
	09T302MFP-SK				< 0.2		●	●	●
	09T304MFP-SK				< 0.4		●	●	●
 Finishing / Sharp Edge / Polished	CCGT 060201MP-CK	6.35	2.38	2.8	< 0.1	7°	●		●
	060202MP-CK				< 0.2		●		●
	CCGT 09T301MP-CK	9.525	3.97	4.4	< 0.1	7°	●		●
	09T302MP-CK				< 0.2		●		●
 Finishing-Medium / Sharp Edge /Polished	CCGT 060201MFP-GQ	6.35	2.38	2.8	< 0.1	7°	●	●	●
	060202MFP-GQ				< 0.2		●	●	●
	060204MFP-GQ				< 0.4		●	●	●
	CCGT 09T301MFP-GQ	9.525	3.97	4.4	< 0.1	7°	●	●	●
	09T302MFP-GQ				< 0.2		●	●	●
	09T304MFP-GQ				< 0.4		●	●	●
 Wiper Edge / Finishing	CCMT 060202WP	6.35	2.38	2.8	0.2	7°	●		
	060204WP				0.4		●		
	060208WP				0.8		●		
	CCMT 09T302WP	9.525	3.97	4.4	0.2	7°	●		
	09T304WP				0.4		●		
	09T308WP				0.8		●		
 Finishing	CCMT 060202PP	6.35	2.38	2.8	0.2	7°	●		●
	060204PP				0.4		●		●
	CCMT 09T302PP	9.525	3.97	4.4	0.2	7°	●		●
	09T304PP				0.4		●		●
	09T308PP				0.8		●		●
 Finishing-Medium	CCMT 060202GK	6.35	2.38	2.8	0.2	7°	●		●
	060204GK				0.4		●		●
	CCMT 09T302GK	9.525	3.97	4.4	0.2	7°	●		●
	09T304GK				0.4		●		●
	CCMT 120404GK	12.7	4.76	5.5	0.4	7°	●		
	120408GK				0.8		●		
	120412GK				1.2		●		

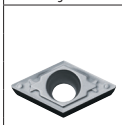
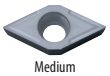
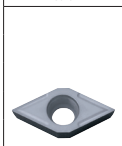
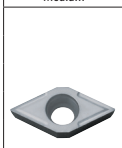
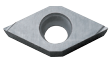
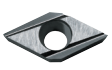
Shape Handed Insert shows Left-hand	Description	Dimensions (mm)					MEGACOAT NANO PLUS		MEGA COAT NANO
		I.C.	Thickness	Hole	Corner-R (RE)	Relief Angel	PR1725	PR1705	PR1535
 Finishing-Medium	CCMT 060202HQ	6.35	2.38	2.8	0.2	7°	●		●
	060204HQ				0.4		●		●
	CCMT 09T302HQ	9.525	3.97	4.4	0.2	7°	●		●
	09T304HQ				0.4		●		●
	09T308HQ				0.8		●		●
 Medium	CCMT 09T308	9.525	3.97	4.4	0.8	7°	●		●
 Medium / Sharp Edge	CCGT 0602005MF	6.35	2.38	2.8	< 0.05	7°	●		●
	060201MF				< 0.1		●		●
	060202MF				< 0.2		●	●	●
	060204MF				< 0.4		●	●	●
	CCGT 09T3005MF	9.525	3.97	4.4	< 0.05	7°	●		●
	09T301MF				< 0.1		●	●	●
	09T302MF				< 0.2		●	●	●
	09T304MF				< 0.4		●	●	●
 Finishing / Sharp Edge	CCET 0301005M $^{R}/_{L}$-F	3.5	1.4	1.9	< 0.05	7°	●		●
	030101M $^{R}/_{L}$-F				< 0.1		●		●
	030102M $^{R}/_{L}$-F				< 0.2		●	L	●
	030104M $^{R}/_{L}$-F				< 0.4		●	L	●
	CCET 040101M $^{R}/_{L}$-F	4.3	1.8	2.3	< 0.1	7°	●		●
	040102M $^{R}/_{L}$-F				< 0.2		●	●	●
	040104M $^{R}/_{L}$-F				< 0.4		●	L	●
 Finishing / Sharp Edge	CCET 09T301M $^{R}/_{L}$-P	9.525	3.97	4.4	< 0.1	7°	●		●
	09T302M $^{R}/_{L}$-P				< 0.2		●		●
	09T304M $^{R}/_{L}$-P				< 0.4		●		●
 Low Feed / Sharp Edge	CCET 0602005MF $^{R}/_{L}$-U	6.35	2.38	2.8	< 0.05	7°	●	R	●
	060201MF $^{R}/_{L}$-U				< 0.1		●	R	●
	060202MF $^{R}/_{L}$-U				< 0.2		●	●	●
	CCET 09T3005MF $^{R}/_{L}$-U	9.525	3.97	4.4	< 0.05	7°	●	R	●
	09T301MF $^{R}/_{L}$-U				< 0.1		●	●	●
	09T302MF $^{R}/_{L}$-U				< 0.2		●	●	●
	09T304MF $^{R}/_{L}$-U				< 0.4		●		●
 Low Feed / Honed Edge	CCGT 060202ME $^{R}/_{L}$-U	6.35	2.38	2.8	< 0.2	7°	●		
	060204ME $^{R}/_{L}$-U				< 0.4		●		
	CCGT 09T301MER-U	9.525	3.97	4.4	< 0.1	7°	R		
	09T302ME $^{R}/_{L}$-U				< 0.2		●		
	09T304ME $^{R}/_{L}$-U				< 0.4		●		
 Low Feed / Sharp Edge	CCET 0602005MFR-J	6.35	2.38	2.8	< 0.05	7°	R		R
	060201MF $^{R}/_{L}$-J				< 0.1		●		●
	060202MF $^{R}/_{L}$-J				< 0.2		●		●
	CCET 09T301MF $^{R}/_{L}$-J	9.525	3.97	4.4	< 0.1	7°	●		●
	09T302MF $^{R}/_{L}$-J				< 0.2		●		●
	09T304MF $^{R}/_{L}$-J				< 0.4		●		●
 Finishing	CPMT 080202PP	7.94	2.38	3.3	0.2	11°	●		●
	080204PP				0.4		●		●
	CPMT 090302PP	9.525	3.18	4.4	0.2	11°	●		●
	090304PP				0.4		●		●
	090308PP				0.8		●		●
 Finishing	CPMT 080204GP	7.94	2.38	3.3	0.4	11°	●		●
	CPMT 090304GP	9.525	3.18	4.4	0.4	11°	●		●
	090308GP				0.8		●		●
 Finishing-Medium	CPMH 080204HQ	7.94	2.38	3.5	0.4	11°	●		●
	080208HQ				0.8		●		●
	CPMH 090304HQ	9.525	3.18	4.5	0.4	11°	●		●
	090308HQ				0.8		●		●

• Insert with corner R (RE) dimension expressed with less than sign (e.g. <0.1, <0.2 etc.) indicates models with minus tolerance for corner R (RE)

● : Standard Stock R : R-hand Only L : L-hand Only

Stock Items (Positive)

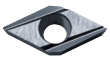
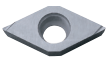
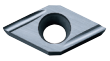
Shape Handed Insert shows Left-hand	Description	Dimensions (mm) I.C.	Thickness	Hole	Corner-R (RE)	Relief Angel	MEGACOAT NANO PLUS PR1725	PR1705	MEGA COAT NANO PR1535
 Medium	CPMH 080204	7.94	2.38	3.5	0.4	11°	●		●
	080208				0.8		●		●
	CPMH 090304	9.525	3.18	4.5	0.4	11°	●		●
	090308				0.8		●		●
 Low Carbon Steel / Finishing	CPMT 080204XP	7.94	2.38	3.3	0.4	11°	●		●
	CPMT 090304XP	9.525	3.18	4.4	0.4	11°	●		●
	090308XP				0.8		●		●
 Finishing-Medium	CPMH 080204 R/L-Y	7.94	2.38	3.5	0.4	11°	●		
	CPMH 090304 R/L-Y	9.525	3.18	4.5	0.4	11°	●		
 Minute DOC / Sharp Edge / Polished	DCGT 070201MP-CF	6.35	2.38	2.8	< 0.1	7°	●		●
	070202MP-CF				< 0.2		●	●	●
	DCGT 11T301MP-CF	9.525	3.97	4.4	< 0.1	7°	●	●	●
	11T302MP-CF				< 0.2		●	●	●
 Finishing / Sharp Edge / Polished	DCGT 070201MFP-GF	6.35	2.38	2.8	< 0.1	7°	●	●	●
	070202MFP-GF				< 0.2		●	●	●
	070204MFP-GF				< 0.4		●	●	●
	DCGT 11T301MFP-GF	9.525	3.97	4.4	< 0.1	7°	●	●	●
	11T302MFP-GF				< 0.2		●	●	●
	11T304MFP-GF				< 0.4		●	●	●
 Finishing / Sharp Edge / Polished	DCGT 0702005MFP-SKS	6.35	2.38	2.8	< 0.05	7°	●	●	●
	070201MFP-SKS				< 0.1		●	●	●
	070202MFP-SKS				< 0.2		●	●	●
	DCGT 11T3005MFP-SKS	9.525	3.97	4.4	< 0.05	7°	●	●	●
	11T301MFP-SKS				< 0.1		●	●	●
	11T302MFP-SKS				< 0.2		●	●	●
	11T304MFP-SKS				< 0.4		●	●	●
 Semi-finishing/ Sharp Edge / Polished	DCGT 070201MFP-SK	6.35	2.38	2.8	< 0.1	7°	●	●	●
	070202MFP-SK				< 0.2		●	●	●
	070204MFP-SK				< 0.4		●	●	●
	DCGT 11T301MFP-SK	9.525	3.97	4.4	< 0.1	7°	●	●	●
	11T302MFP-SK				< 0.2		●	●	●
	11T304MFP-SK				< 0.4		●	●	●
 Finishing / Sharp Edge / Polished	DCGT 070201MP-CK	6.35	2.38	2.8	< 0.1	7°	●	●	●
	070202MP-CK				< 0.2		●	●	●
	DCGT 11T301MP-CK	9.525	3.97	4.4	< 0.1	7°	●	●	●
	11T302MP-CK				< 0.2		●	●	●
 Finishing-Medium / Sharp Edge / Polished	DCGT 070201MFP-GQ	6.35	2.38	2.8	< 0.1	7°	●	●	●
	070202MFP-GQ				< 0.2		●	●	●
	070204MFP-GQ				< 0.4		●	●	●
	DCGT 11T301MFP-GQ	9.525	3.97	4.4	< 0.1	7°	●	●	●
	11T302MFP-GQ				< 0.2		●	●	●
	11T304MFP-GQ				< 0.4		●	●	●
 Wiper Edge / Finishing	DCMX 070202WP	6.35	2.38	2.8	0.2	7°	●		
	070204WP				0.4		●		
	070208WP				0.8		●		
	DCMX 11T302WP	9.525	3.97	4.4	0.2	7°	●		
	11T304WP				0.4		●		
	11T308WP				0.8		●		
 Wiper Edge / Finishing	DCMX 070204 R/L-WP	6.35	2.38	2.8	0.4	7°	●		
	DCMX 11T304 R/L-WP	9.525	3.97	4.4	0.4	7°	●		
 Finishing	DCMT 070202PP	6.35	2.38	2.8	0.2	7°	●		●
	070204PP				0.4		●		●
	DCMT 11T302PP	9.525	3.97	4.4	0.2	7°	●		●
	11T304PP				0.4		●		●
	11T308PP				0.8		●		●
 Finishing	DCMT 070202GP	6.35	2.38	2.8	0.2	7°	●		●
	070204GP				0.4		●		●
	DCMT 11T304GP	9.525	3.97	4.4	0.4	7°	●		●
	11T308GP				0.8		●		●

Shape Handed Insert shows Left-hand	Description	Dimensions (mm) I.C.	Thickness	Hole	Corner-R (RE)	Relief Angel	MEGACOAT NANO PLUS PR1725	PR1705	MEGA COAT NANO PR1535
 Finishing-Medium	DCMT 070202GK	6.35	2.38	2.8	0.2	7°	●		●
	070204GK				0.4		●		●
	070208GK				0.8		●		●
	DCMT 11T302GK	9.525	3.97	4.4	0.2	7°	●		●
	11T304GK				0.4		●		●
	11T308GK				0.8		●		●
 Finishing-Medium	DCMT 070202HQ	6.35	2.38	2.8	0.2	7°	●		●
	070204HQ				0.4		●		●
	070208HQ				0.8		●		●
	DCMT 11T302HQ	9.525	3.97	4.4	0.2	7°	●		●
	11T304HQ				0.4		●		●
	11T308HQ				0.8		●		●
 Medium	DCMT 11T308	9.525	3.97	4.4	0.8	7°	●		
 Medium	DCGT 0702005M	6.35	2.38	2.8	< 0.05	7°	●		
	070201M				< 0.1		●		
	070202M				< 0.2		●		
	070204M				< 0.4		●		
	DCGT 11T3005M	9.525	3.97	4.4	< 0.05	7°	●		
	11T301M				< 0.1		●		
	11T302M				< 0.2		●		
	11T304M				< 0.4		●		
 Medium / Sharp Edge	DCGT 0702005MF	6.35	2.38	2.8	< 0.05	7°	●		●
	070201MF				< 0.1		●	●	●
	070202MF				< 0.2		●	●	●
	070204MF				< 0.4		●	●	●
	DCGT 11T3005MF	9.525	3.97	4.4	< 0.05	7°	●		●
	11T301MF				< 0.1		●	●	●
	11T302MF				< 0.2		●	●	●
	11T304MF				< 0.4		●	●	●
 Low Carbon Steel / Finishing	DCMT 070204XP	6.35	2.38	2.8	0.4	7°	●		●
	DCMT 11T302XP	9.525	3.97	4.4	0.2	7°	●		●
	11T304XP				0.4		●		●
	11T308XP				0.8		●		●
 Finishing / Sharp Edge	DCET 0702005M R/L-F	6.35	2.38	2.8	< 0.05	7°	R	●	R
	070201M R/L-F				< 0.1		●		●
	070202M R/L-F				< 0.2		●		●
	070204M R/L-F				< 0.4		●		●
	DCET 11T3005MR-F	9.525	3.97	4.4	< 0.05	7°	R		R
	11T301M R/L-F				< 0.1		●		●
	11T302M R/L-F				< 0.2		●	●	●
	11T304M R/L-F				< 0.4		●	●	●
 Low Feed / Sharp Edge	DCET 0702005MFR-U	6.35	2.38	2.8	< 0.05	7°	R		R
	070201MF R/L-U				< 0.1		●	R	●
	070202MF R/L-U				< 0.2		●	R	●
	DCET 11T3005MFR-U	9.525	3.97	4.4	< 0.05	7°	R	R	R
	11T301MF R/L-U				< 0.1		●	R	●
	11T302MF R/L-U				< 0.2		●	●	●
	11T304MFR-U				< 0.4		R	R	R
 Low Feed / Honed Edge	DCGT 070201MER-U	6.35	2.38	2.8	< 0.1	7°	R		
	070202ME R/L-U				< 0.2		●		
	070204ME R/L-U				< 0.4		●		
	DCGT 11T301ME R/L-U	9.525	3.97	4.4	< 0.1	7°	●		
	11T302ME R/L-U				< 0.2		●		
	11T304ME R/L-U				< 0.4		●		
 Low Feed / Sharp Edge	DCET 0702005MFR-J	6.35	2.38	2.8	< 0.05	7°	R		R
	070201MF R/L-J				< 0.1		●		●
	070202MF R/L-J				< 0.2		●		●
	DCET 11T3005MFR-J	9.525	3.97	4.4	< 0.05	7°	R		R
	11T301MF R/L-J				< 0.1		●	R	●
	11T302MF R/L-J				< 0.2		●	R	●
	11T304MF R/L-J				< 0.4		R	●	R

• Insert with corner R (RE) dimension expressed with less than sign (e.g. <0.1, <0.2 etc.) indicates models with minus tolerance for corner R (RE)

● : Standard Stock R : R-hand Only

Stock Items (Positive)

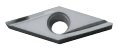
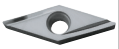
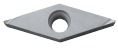
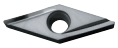
Shape Handed Insert shows Left-hand	Description		Dimensions (mm)					MEGACOAT NANO PLUS		MEGA COAT NANO
			I.C.	Thickness	Hole	Corner-R (RE)	Relief Angel	PR1725	PR1705	PR1535
 Low Feed / Honed Edge	DCGT	11T3005MER-J	9.525	3.97	4.4	< 0.05	7°	R		
		11T301MER-J				< 0.1		R		
		11T302MER-J				< 0.2		R		
		11T304ME R/L-J				< 0.4		●		
Super Fine  Finishing / Sharp Edge / Precision	DPET	070202M R/L-FSF	6.35	2.38	2.8	< 0.2	11°	●		
	DPET	11T3005MR-FSF	9.525	3.97	4.4	< 0.05	11°	R		
		11T301MR-FSF				< 0.1		R		
		11T302MR-FSF				< 0.2		R		
Super Fine  Low Feed / Sharp Edge / Precision	DPET	0702005MFR-USF	6.35	2.38	2.8	< 0.05	11°	R		
		070201MFR-USF				< 0.1		R		
		070202MFR-USF				< 0.2		R		
	DPET	11T3005MFR-USF	9.525	3.97	4.4	< 0.05	11°	R		
		11T301MFR-USF				< 0.1		R		
		11T302MFR-USF				< 0.2		R		
Super Fine  Finishing / Sharp Edge / Precision	JCET	030101M R/L-FSF	3.5	1.4	1.9	< 0.1	7°	●		
 Finishing / Sharp Edge	JCET	030102M R/L-F	3.5	1.4	1.9	< 0.2	7°	●		●
		030104M R/L-F				< 0.4		●		●
 Minute DOC / Sharp Edge / Polished	TBGT	060101MP-CF	3.97	1.59	2.3	< 0.1	5°	●		●
		060102MP-CF				< 0.2		●	●	●
 Finishing / Sharp Edge / Polished	TBGT	060101MFP-PF	3.97	1.59	2.3	< 0.1	5°	●		●
		060102MFP-PF				< 0.2		●		●
		060104MFP-PF				< 0.4		●		●
 Finishing	TBET	0601005M R/L	3.97	1.59	2.3	< 0.05	5°	●		●
		060101M R/L				< 0.1		●		●
		060102M R/L				< 0.2		●	L	●
		060104M R/L				< 0.4		●	●	●
 Wiper Edge / Finishing	TCMX	090204WP	5.56	2.38	2.5	0.4	7°	●		
	TCMX	110204WP	6.35	2.38	2.8	0.4	7°	●		
Super Fine  Low Feed / Sharp Edge / Precision	TCET	1103005MFR-USF	6.35	3.18	2.8	< 0.05	7°	R		
		110301MFR-USF				< 0.1		R		
		110302MFR-USF				< 0.2		R		
 Low Feed / Honed Edge	TCGT	080202MER-U	4.76	2.38	2.3	< 0.2	7°	R		
	TCGT	110302ME R/L-U	6.35	3.18	2.8	< 0.2	7°	●		
		110304MER-U				< 0.4		R		
 Minute DOC / Sharp Edge / Polished	TPGT	080201MP-CF	4.76	2.38	2.3	< 0.1	11°	●		●
		080202MP-CF				< 0.2		●	●	●
	TPGT	090201MP-CF	5.56	2.38	3.0	< 0.1	11°	●		●
		090202MP-CF				< 0.2		●	●	●
 Finishing / Sharp Edge / Polished	TPGT	090201MFP-PF	5.56	2.38	3.0	< 0.1	11°	●		●
		090202MFP-PF				< 0.2		●		●
		090204MFP-PF				< 0.4		●		●
 Wiper Edge / Finishing	TPMX	090202WP	5.56	2.38	2.8	0.2	11°	●		
		090204WP				0.4		●		
		090208WP				0.8		●		
	TPMX	110302WP	6.35	3.18	3.3	0.2	11°	●		
		110304WP				0.4		●		
		110308WP				0.8		●		
 Wiper Edge / Finishing	TPMX	110304 R/L-WP	6.35	3.18	3.3	0.4	11°	●		

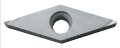
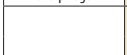
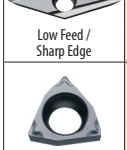
Shape Handed Insert shows Left-hand	Description		Dimensions (mm)					MEGACOAT NANO PLUS		MEGA COAT NANO
			I.C.	Thickness	Hole	Corner-R (RE)	Relief Angel	PR1725	PR1705	PR1535
 Finishing	TPMT	090202PP	5.56	2.38	2.8	0.2	11°	●		●
		090204PP				0.4		●		●
	TPMT	110302PP	6.35	3.18	3.3	0.2	11°	●		●
		110304PP				0.4		●		●
		110308PP				0.8		●		●
 Finishing	TPMT	090202GP	5.56	2.38	2.8	0.2	11°	●		●
		090204GP				0.4		●		●
	TPMT	110304GP	6.35	3.18	3.3	0.4	11°	●		●
		110308GP				0.8		●		●
	TPMT	160304GP	9.525	3.18	4.4	0.4	11°	●		●
 Finishing-Medium	TPMT	090202HQ	5.56	2.38	2.8	0.2	11°	●		●
		090204HQ				0.4		●		●
	TPMT	110302HQ	6.35	3.18	3.3	0.2	11°	●		●
		110304HQ				0.4		●		●
		110308HQ				0.8		●		●
	TPMT	160302HQ	9.525	3.18	4.4	0.2	11°	●		●
		160304HQ				0.4		●		●
		160308HQ				0.8		●		●
 Low Carbon Steel / Finishing	TPMT	090204XP	5.56	2.38	2.8	0.4	11°	●		●
	TPMT	110304XP	6.35	3.18	3.3	0.4	11°	●		●
		110308XP				0.8		●		●
	TPMT	160304XP	9.525	3.18	4.4	0.4	11°	●		●
		160308XP				0.8		●		●
 Finishing / Sharp Edge	TPGH	080201 R/L	4.76	2.38	2.3	0.1	11°	●		●
		080202 R/L				0.2		●	●	●
		080204 R/L				0.4		●	●	●
	TPGH	090201 R/L	5.56	2.38	3.0	0.1	11°	●		●
		090202 R/L				0.2		●	●	●
		090204 R/L				0.4		●	●	●
	TPGH	110202 R/L	6.35	2.38	3.5	0.2	11°	●	L	●
		110204 R/L				0.4		●	L	●
	TPGH	110302 R/L	6.35	3.18	3.3	0.2	11°	●	●	●
		110304 R/L				0.4		●	●	●
		110308 R/L				0.8		●	L	●
	TPGH	160302 R/L	9.525	3.18	4.5	0.2	11°	●		●
		160304 R/L				0.4		●	L	●
		160308 R/L				0.8		●		●
 Medium	TPGH	090201L-H	5.56	2.38	3.0	0.1	11°	L		L
		090202L-H				0.2		L		L
		090204L-H				0.4		L		L
	TPGH	110302 R/L-H	6.35	3.18	3.3	0.2	11°	●		●
		110304 R/L-H				0.4		●		●
		110308 R/L-H				0.8		●		●
	TPGH	160304 R/L-H	9.525	3.18	4.5	0.4	11°	●		●
		160308 R/L-H				0.8		●		●
Super Fine  Finishing / Sharp Edge / Precision	TPET	080202L-FSF	4.76	2.38	2.3	0.2	11°	L		
	TPET	1103005L-FSF	6.35	3.18	3.3	0.05	11°	L		
		110301 R/L-FSF				0.1		●		
		110302 R/L-FSF				0.2		●		
 Finishing / Sharp Edge	TPEH	080201M R/L-P	4.76	2.38	2.3	< 0.1	11°	●		●
		080202M R/L-P				< 0.2		●		●
		080204M R/L-P				< 0.4		●		●
	TPEH	090201M R/L-P	5.56	2.38	3.0	< 0.1	11°	●		●
		090202M R/L-P				< 0.2		●		●
		090204M R/L-P				< 0.4		●		●
	TPEH	110301M R/L-P	6.35	3.18	3.3	< 0.1	11°	●		●
		110302M R/L-P				< 0.2		●		●
		110304M R/L-P				< 0.4		●		●
Super Fine  Low Feed / Sharp Edge / Precision	TPET	080202F R/L-USF	4.76	2.38	2.3	0.2	11°	●		
	TPET	110301FL-USF	6.35	3.18	3.3	0.1	11°	L		
		110302F R/L-USF				0.2		●		

• Insert with corner R (RE) dimension expressed with less than sign (e.g. <0.1, <0.2 etc.) indicates models with minus tolerance for corner R (RE)

● : Standard Stock R : R-hand Only L : L-hand Only

Stock Items (Positive)

Shape Handed Insert shows Left-hand	Description	Dimensions (mm) I.C.	Thickness	Hole	Corner-R (RE)	Relief Angel	MEGACOAT NANO PLUS PR1725	PR1705	MEGA COAT NANO PR1535
 Finishing	VBMT 110302PP	6.35	3.18	2.8	0.2	5°	●		●
	110304PP				0.4		●		●
	110308PP				0.8		●		●
	VBMT 160404PP	9.525	4.76	4.4	0.4	5°	●		●
	160408PP				0.8		●		●
	160412PP				1.2		●		●
 Finishing	VBMT 110304GP	6.35	3.18	2.8	0.4	5°	●		●
	VBMT 160404GP	9.525	4.76	4.4	0.4	5°	●		
	160408GP				0.8		●		
 Finishing	VBMT 110302VF	6.35	3.18	2.8	0.2	5°	●		●
	110304VF				0.4		●		●
	110308VF				0.8		●		●
	VBMT 160402VF	9.525	4.76	4.4	0.2	5°	●		
	160404VF				0.4		●		
	160408VF				0.8		●		
	160412VF				1.2		●		
 Finishing-Medium	VBMT 110304HQ	6.35	3.18	2.8	0.4	5°	●		●
	110308HQ				0.8		●		●
	VBMT 160404HQ	9.525	4.76	4.4	0.4	5°	●		
	160408HQ				0.8		●		
	160412HQ				1.2		●		
 Finishing / Sharp Edge	VBET 1103005M R/L-F	6.35	3.18	2.8	< 0.05	5°	●		●
	110301M R/L-F				< 0.1		●	R	●
	110302M R/L-F				< 0.2		●	●	●
 Finishing-Medium / Sharp Edge	VBET 1103005M R/L-Y	6.35	3.18	2.8	< 0.05	5°	●		●
	110301M R/L-Y				< 0.1		●		●
	110302M R/L-Y				< 0.2		●		●
	110304M R/L-Y				< 0.4		●		●
 Finishing-Medium	VBGT 160402MR-Y	9.525	4.76	4.4	< 0.2	5°		R	
	160404MR-Y				< 0.4			R	
 Minute DOC / Sharp Edge / Polished	VCGT 110301MP-CF	6.35	3.18	2.8	< 0.1	7°	●		●
	110302MP-CF				< 0.2		●		●
 Finishing / Sharp Edge / Polished	VCGT 110301MFP-GF	6.35	3.18	2.8	< 0.1	7°	●	●	●
	110302MFP-GF				< 0.2		●	●	●
 Finishing / Sharp Edge / Polished	VCGT 110301MFP-SKS	6.35	3.18	2.8	< 0.1	7°	●	●	●
	110302MFP-SKS				< 0.2		●	●	●
	110304MFP-SKS				< 0.4		●	●	●
 Finishing	VCMT 080202PP	4.76	2.38	2.3	0.2	7°	●		●
	080204PP				0.4		●		●
	VCMT 160404PP	9.525	4.76	4.4	0.4	7°	●		●
	160408PP				0.8		●		●
 Finishing	VCMT 080202VF	4.76	2.38	2.3	0.2	7°	●		●
	080204VF				0.4		●		●
 Finishing-Medium	VCMT 080202HQ	4.76	2.38	2.3	0.2	7°	●		●
	080204HQ				0.4		●		●
 Finishing / Sharp Edge	VCET 110301M R/L-F	6.35	3.18	2.8	< 0.1	7°	●		●
	110302M R/L-F				< 0.2		●		●
	110304M R/L-F				< 0.4		●		●
 Finishing-Medium / Sharp Edge	VCET 1103005M R/L-Y	6.35	3.18	2.8	< 0.05	7°	●		●
	110301M R/L-Y				< 0.1		●		●
	110302M R/L-Y				< 0.2		●		●
	110304M R/L-Y				< 0.4		●		●
 Minute DOC / Sharp Edge / Polished	VPGT 110301MP-CF	6.35	3.18	2.8	< 0.1	11°	●	●	●
	110302MP-CF				< 0.2		●	●	●

Shape Handed Insert shows Left-hand	Description	Dimensions (mm) I.C.	Thickness	Hole	Corner-R (RE)	Relief Angel	MEGACOAT NANO PLUS PR1725	PR1705	MEGA COAT NANO PR1535
 Finishing / Sharp Edge / Polished	VPGT 110301MFP-GF	6.35	3.18	2.8	< 0.1	11°	●	●	●
	110302MFP-GF				< 0.2		●	●	●
 Finishing / Sharp Edge / Polished	VPGT 110301MFP-SKS	6.35	3.18	2.8	< 0.1	11°	●	●	●
	110302MFP-SKS				< 0.2		●	●	●
	110304MFP-SKS				< 0.4		●	●	●
 Finishing / Sharp Edge / Polished	VPGT 080201MP-CK	4.76	2.38	2.3	< 0.1	11°	●	●	●
	080202MP-CK				< 0.2		●	●	●
	VPGT 110301MP-CK	6.35	3.18	2.8	< 0.1	11°	●	●	●
	110302MP-CK				< 0.2		●	●	●
 Finishing / Sharp Edge	VPET 080201M R/L-F	4.76	2.38	2.3	< 0.1	11°	●		●
	080202M R/L-F				< 0.2		●		●
	VPET 1103005MR-F	6.35	3.18	2.8	< 0.05	11°	R		R
	110301MR-F				< 0.1		R		R
	110302M R/L-F				< 0.2		●		●
 Low Feed / Sharp Edge	VPET 080201MF R/L-U	4.76	2.38	2.3	< 0.1	11°	●		●
	080202MF R/L-U				< 0.2		●		●
	VPET 1103005MF R/L-U	6.35	3.18	2.8	< 0.05	11°	●		●
	110301MF R/L-U				< 0.1		●		●
	110302MF R/L-U				< 0.2		●		●
 Low Feed / Sharp Edge	VPET 1103005MFR-J	6.35	3.18	2.8	< 0.05	11°	R		R
	110301MF R/L-J				< 0.1		●		●
	110302MF R/L-J				< 0.2		●		●
 Minute DOC / Sharp Edge / Polished	WBGT 060101MP R/L-CF	3.97	1.59	2.3	< 0.1	5°	●		●
	060102MP R/L-CF				< 0.2		●	L	●
 Finishing / Sharp Edge / Polished	WBGT 060101MFP R/L-PF	3.97	1.59	2.3	< 0.1	5°	●		●
	060102MFP R/L-PF				< 0.2		●		●
	WBGT 080201MFP R/L-PF	4.76	2.38	2.3	< 0.1	5°	●		●
	080202MFP R/L-PF				< 0.2		●		●
 Finishing	WBMT 060102 R/L-DP	3.97	1.59	2.3	0.2	5°	●		●
	060104 R/L-DP				0.4		●		●
	WBMT 080202 R/L-DP	4.76	2.38	2.3	0.2	5°	●		●
	080204 R/L-DP				0.4		●		●
 Finishing / Sharp Edge	WBET 0601005ML-F	3.97	1.59	2.3	< 0.05	5°	L		L
	060101M R/L-F				< 0.1		●	L	●
	060102M R/L-F				< 0.2		●	L	●
	060104M R/L-F				< 0.4		●	L	●
	WBET 080201ML-F	4.76	2.38	2.3	< 0.1	5°	L		L
	080202ML-F				< 0.2		L		L
	080204M R/L-F				< 0.4		●		●
 Finishing / Sharp Edge	WBET 080201M R/L-P	4.76	2.38	2.3	< 0.1	5°	●		●
	080202M R/L-P				< 0.2		●		●
	080204M R/L-P				< 0.4		●		●
 Finishing	WPMT 110204GP	6.35	2.38	2.8	0.4	11°	●		
	WPMT 160304GP	9.525	3.18	4.4	0.4	11°	●		
 Finishing-Medium	WPMT 110202HQ	6.35	2.38	2.8	0.2	11°	●		
	110204HQ				0.4		●		
	WPMT 160304HQ	9.525	3.18	4.4	0.4	11°	●		
	160308HQ				0.8		●		
 Finishing-Medium	WPGT 110204M R/L-Y	6.35	2.38	2.8	< 0.4	11°	L	●	

● : Standard Stock R : R-hand Only L : L-hand Only

• Insert with corner R (RE) dimension expressed with less than sign (e.g. <0.1, <0.2 etc.) indicates models with minus tolerance for corner R (RE)

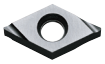
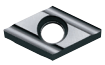
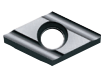
Stock Items (Negative)

Shape Handed Insert shows Right-hand	Description	Dimensions (mm) I.C.	Thickness	Hole	Corner-R (RE)	MEGACOAT NANO PLUS PR1725	MEGA COAT NANO PR1535
 Finishing-Medium / Sharp Edge / Polished	CNGG 120402MFP-SK	12.70	4.76	5.16	< 0.2	●	●
	120404MFP-SK				< 0.4	●	●
 Medium-Roughing / Sharp Edge / Polished	CNGG 120404FP-TK	12.70	4.76	5.16	0.4	●	●
	120408FP-TK				0.8	●	●
 Finishing-Medium / Sharp Edge / Polished	DNGG 150402MFP-SK	12.70	4.76	5.16	< 0.2	●	●
	150404MFP-SK				< 0.4	●	●
 Large DOC	DNMG 150402R-LD	12.70	4.76	5.16	0.2	R	R
	150404R-LD				0.4	R	R
 Medium-Roughing / Sharp Edge / Polished	DNGG 150404FP-TK	12.70	4.76	5.16	0.4	●	●
	150408FP-TK				0.8	●	●
 Finishing-Medium / Sharp Edge / Polished	TNGG 160401MFP-SK	9.525	4.76	3.81	< 0.1	●	●
	160402MFP-SK				< 0.2	●	●
	160404MFP-SK				< 0.4	●	●
 Large DOC	TNMG 160402R-LD	9.525	4.76	3.81	0.2	R	R
	160404R-LD				0.4	R	R
 Medium-Roughing / Sharp Edge /Polished	TNGG 160404FP-TK	9.525	4.76	3.81	0.4	●	●
	160408FP-TK				0.8	●	●
 Finishing / Surface Roughness Oriented / Sharp Edge	TNGG 160402 $^{R}/_{L}$-S	9.525	4.76	3.81	0.2	●	●
	160404 $^{R}/_{L}$-S				0.4	●	●
	160408 $^{R}/_{L}$-S				0.8	●	●
 Finishing-Medium / Sharp Edge / Polished	VNGG 160402MFP-SK	9.525	4.76	3.81	< 0.2	●	●
	160404MFP-SK				< 0.4	●	●

●: Standard Stock R : R-hand Only

• Insert with corner R (RE) dimension expressed with less than sign (e.g. <0.1, <0.2 etc.) indicates models with minus tolerance for corner R (RE)

Stock Item (Small double-sided tooling)

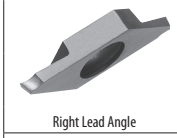
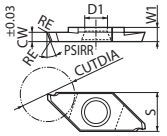
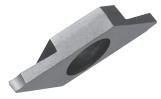
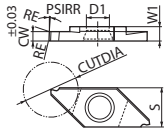
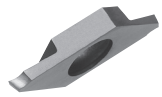
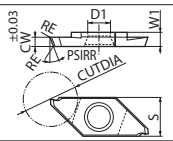
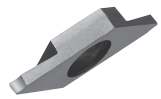
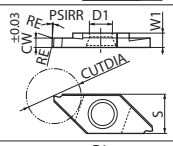
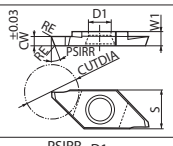
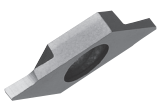
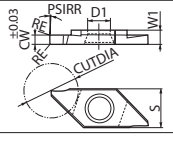
Shape Handed Insert shows Right-hand	Description	Dimensions (mm) I.C.	Thickness	Hole	Corner-R (RE)	MEGACOAT NANO PLUS PR1725	PR1705	MEGA COAT NANO PR1535
 Finishing-Medium / Sharp Edge / Polished	CNGU 070301MFP-SK	7.5	3.18	3.6	< 0.1	●		●
	070302MFP-SK				< 0.2	●		●
 Medium-Roughing / Honed Edge	CNMU 070302E-GK	7.5	3.18	3.6	0.2	●		●
	070304E-GK				0.4	●		●
 Finishing / Sharp Edge	CNGU 0703005MFR-F	7.5	3.18	3.6	< 0.05		R	
	070301MFR-F				< 0.1	R	R	R
	070302MFR-F				< 0.2	R	R	R
	070304MFR-F				< 0.4	R	R	R
 Low Feed / Sharp Edge	CNGU 0703005MFR-U	7.5	3.18	3.6	< 0.05		R	
	070301MFR-U				< 0.1	R	R	R
	070302MFR-U				< 0.2	R	R	R
	070304MFR-U				< 0.4	R	R	R
 Finishing-Medium / Sharp Edge / Polished	DNGU 080301MFP-SK	7.0	3.18	3.6	< 0.1	●		●
	080302MFP-SK				< 0.2	●		●
	080304MFP-SK				< 0.4	●		●
 Medium-Roughing / Honed Edge	DNMU 080302E-GK	7.0	3.18	3.6	0.2	●		●
	080304E-GK				0.4	●		●
 Finishing / Sharp Edge	DNGU 080301MFR-F	7.0	3.18	3.6	< 0.1	R		R
	080302MFR-F				< 0.2	R	R	R
	080304MFR-F				< 0.4	R		R
 Low Feed / Sharp Edge	DNGU 080301MFR-U	7.0	3.18	3.6	< 0.1	R	R	R
	080302MFR-U				< 0.2	R	R	R
	080304MFR-U				< 0.4	R		R
 Low Feed / Honed Edge	DNGU 080301MER-U	7.0	3.18	3.6	< 0.1	R	R	
	080302MER-U				< 0.2	R	R	
	080304MER-U				< 0.4	R	R	
 Finishing / Sharp Edge	TNGU 090301MFR-F	5.56	3.18	3.0	< 0.1	R	R	R
	090302MFR-F				< 0.2	R	R	R
	090304MFR-F				< 0.4	R	R	R
 Low Feed / Sharp Edge	TNGU 090301MFR-U	5.56	3.18	3.0	< 0.1	R		R
	090302MFR-U				< 0.2	R	R	R
	090304MFR-U				< 0.4	R	R	R
 Low Feed / Honed Edge	TNGU 090304MER-U	5.56	3.18	3.0	< 0.4	R	R	

●: Standard Stock R : R-hand Only

• Insert with corner R (RE) dimension expressed with less than sign (e.g. <0.1, <0.2 etc.) indicates models with minus tolerance for corner R (RE)

• For more details on applicable toolholders, see the KYOCERA general product catalog

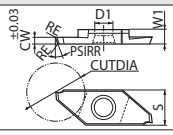
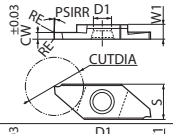
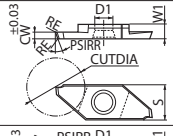
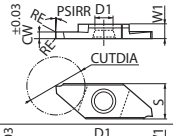
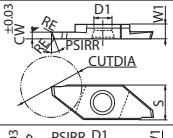
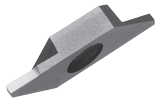
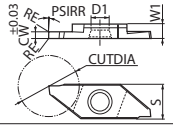
Stock Items (Cut-off) TKF12

Shape (Right-hand shown)		Description		Dimensions (mm)						Angle	MEGACOAT NANO PLUS PR1725		MEGACOAT NANO PR1535		Applicable Toolholders
				CW	CUTDIA	RE	W1	S	D1	PSIRR	R	L	R	L	
 Right Lead Angle		TKF12 R/L	050-S-16DR	0.5	5	0.03	3	8.7	5	16°	●	●	●	●	KTKF R/L…12
			070-S-16DR	0.7	8						●	●	●	●	
			100-S-16DR	1.0	12						●	●	●	●	
			125-S-16DR	1.25							●	●	●	●	
			150-S-16DR	1.5							●	●	●	●	
			200-S-16DR	2.0							●	●	●	●	
		TKF12 R/L	050-S	0.5	5	0.03	3	8.7	5	0°	●	●	●	●	
			070-S	0.7	8						●	●	●	●	
			100-S	1.0	12						●	●	●	●	
			125-S	1.25							●	●	●	●	
			150-S	1.5							●	●	●	●	
			200-S	2.0							●	●	●	●	
 Right Lead Angle / Tough Edge		TKF12 R/L	100-T-16DR	1.0	12	0.08	3	8.7	5	16°	●	●	●	●	
			150-T-16DR	1.5							●	●	●	●	
			200-T-16DR	2.0							●	●	●	●	
 Tough Edge		TKF12 R/L	100-T	1.0	12	0.08	3	8.7	5	0°	●	●	●	●	
			150-T	1.5							●	●	●	●	
			200-T	2.0							●	●	●	●	
 Right Lead Angle / Without Chipbreaker		TKF12 R/L	050-NB-20DR	0.5	5	0	3	8.7	5	20°	●	●	●	●	
			070-NB-20DR	0.7	8						●	●	●	●	
			100-NB-20DR	1.0	12						●	●	●	●	
			150-NB-20DR	1.5							●	●	●	●	
			200-NB-20DR	2.0							●	●	●	●	
 Without Chipbreaker		TKF12 R/L	050-NB	0.5	5	0	3	8.7	5	0°	●	●	●	●	
			070-NB	0.7	8						●	●	●	●	
			100-NB	1.0	12						●	●	●	●	
			150-NB	1.5							●	●	●	●	
			200-NB	2.0							●	●	●	●	

• For more details on applicable toolholders, see the KYOCERA general product catalog

● : Standard Stock

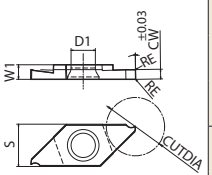
Stock Items (Cut-off) TKF16

Shape (Right-hand shown)		Description		Dimensions (mm)						Angle	MEGACOAT NANO PLUS PR1725		MEGACOAT NANO PR1535		Applicable Toolholders
				CW	CUTDIA	RE	W1	S	D1	PSIRR	R	L	R	L	
 Right Lead Angle		TKF16 R/L	150-S-16DR	1.5	16	0.05	4	9.5	5	16°	●	●	●	●	KTKF R/L…16
			200-S-16DR	2.0							●	●	●	●	
		TKF16 R/L	150-S	1.5	16	0.05	4	9.5	5	0°	●	●	●	●	
			200-S	2.0							●	●	●	●	
 Right Lead Angle / Tough Edge		TKF16 R/L	150-T-16DR	1.5	16	0.08	4	9.5	5	16°	●	●	●	●	
			200-T-16DR	2.0							●	●	●	●	
 Tough Edge		TKF16 R/L	150-T	1.5	16	0.08	4	9.5	5	0°	●	●	●	●	
			200-T	2.0							●	●	●	●	
 Right Lead Angle / Without Chipbreaker		TKF16 R/L	150-NB-20DR	1.5	16	0	4	9.5	5	20°	●	●	●	●	
			200-NB-20DR	2.0							●	●	●	●	
 Without Chipbreaker		TKF16 R/L	150-NB	1.5	16	0	4	9.5	5	0°	●	●	●	●	
			200-NB	2.0							●	●	●	●	

• For more details on applicable toolholders, see the KYOCERA general product catalog

● : Standard Stock

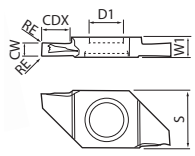
Stock Items (Cut-off for sub spindle) TKFS

Shape (Left-hand shown)		Description		Dimensions (mm) CW	CUTDIA	RE	W1	S	D1	MEGACOAT NANO PLUS PR1725 R	MEGACOAT NANO PLUS PR1725 L	MEGACOAT NANO PR1535 R	MEGACOAT NANO PR1535 L	Applicable Toolholders
		TKFS12 $^{R}/_{L}$	100-S	1.0	6	0.05	2.2	8.7	4.4	●	●	●	●	KTKFS $^{R}/_{L}$…12
			150-S	1.5	9					●	●	●	●	
			200-S	2.0	12					●	●	●	●	
		TKFS16 $^{R}/_{L}$	150-S	1.5	14	0.05	2.2	9.5	4.4	●	●	●	●	KTKFS $^{R}/_{L}$…16
			200-S	2.0	16					●	●	●	●	

• For more details on applicable toolholders, see the KYOCERA general product catalog

● : Standard Stock

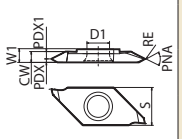
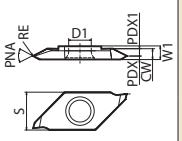
Stock Items (Grooving and Traversing) TKF-GTP Chipbreaker

Shape (Right-hand shown)		Description		Dimensions (mm) CW	CDX	RE	W1	S	D1	Angle PSIRR	MEGACOAT NANO PLUS PR1725	MEGACOAT NANO PR1535	Applicable Toolholders
		TKF12R	200-GTP	2.0	4.6	0.08	3.0	8.7	5.0	0°	●	●	KTKFR…12
		TKF16R	300-GTP	3.0	6.0	0.08	4.0	9.5	5.0	0°	●	●	KTKFR…16

• For more details on applicable toolholders, see the KYOCERA general product catalog

● : Standard Stock

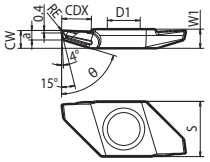
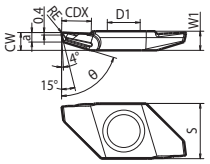
Stock Items (Threading) TKFT

Shape (Right-hand shown)			Description		Thread Type	Pitch mm	Pitch TPI	Dimensions (mm) W1	CW	S	D1	RE	PDX	PDX1	Angle PNA	MEGA COAT NANO PLUS PR1725	MEGA COAT NANO PR1535	Applicable Toolholders
Partial Profile		 Right-hand shown	TKFT	12RA6000	M UN	0.2 ~ 0.6	64 ~ 48	3.0	2.5	8.7	5.2	Max 0.05 Flat	0.4	2.1	60°	●	●	KTKFR…12
				12RB6000									2.1	0.4		●	●	
				12RA60005		0.5 ~ 1.25	48 ~ 24					0.05	0.8	1.7		●	●	
				12RB60005									1.7	0.8		●	●	
				12RN6001		1 ~ 1.5	24 ~ 18					0.1	1.25	1.25		●	●	
				12RA55005	G,R W	–	40 ~ 16					0.05	0.8	1.7	55°	●	●	
				12RB55005									1.7	0.8		●	●	
		 Left-hand shown	TKFT	12LA6000	M UN	0.2 ~ 0.6	64 ~ 48	3.0	2.5	8.7	5.2	Max 0.05 Flat	2.1	0.4	60°	●	●	KTKFL…12
				12LB6000									0.4	2.1		●	●	
				12LA60005		0.5 ~ 1.25	48 ~ 24					0.05	1.7	0.8		●	●	
				12LB60005									0.8	1.7		●	●	
				12LN6001		1 ~ 1.5	24 ~ 18					0.1	1.25	1.25		●	●	
				12LA55005	G,R W	–	40 ~ 16					0.05	1.7	0.8	55°	●	●	
				12LB55005									0.8	1.7		●	●	

• For more details on applicable toolholders, see the KYOCERA general product catalog

● : Standard Stock

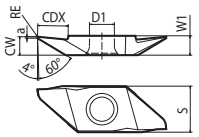
Stock Items (Back Turning) TKFB-GQ Chipbreaker

Shape (Right-hand shown)		Description		Dimensions (mm) CW	a	CDX	RE	W1	S	D1	θ	MEGACOAT NANO PLUS PR1725	MEGACOAT NANO PR1535	Applicable Toolholders
 Polished		TKFB	12R28005P-GQ	2.8	1.5	4.6	0.05	3.0	8.7	5.2	74°	●	●	KTKFR…12
			12R28015P-GQ				0.15					●	●	
		TKFB	16R38005P-GQ	3.8	1.8	6.3	0.05	4.0	9.5	5.2	72°	●	●	KTKFR…16
			16R38015P-GQ				0.15					●	●	
		TKFB	12R28005-GQ	2.8	1.5	4.6	0.05	3.0	8.7	5.2	74°	●	●	KTKFR…12
			12R28015-GQ				0.15					●	●	
		TKFB	16R38005-GQ	3.8	1.8	6.3	0.05	4.0	9.5	5.2	72°	●	●	KTKFR…16
			16R38015-GQ				0.15					●	●	

• For more details on applicable toolholders, see the KYOCERA general product catalog

● : Standard Stock

Stock Items (Back Turning) TKFB

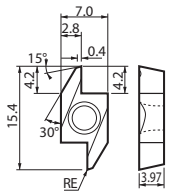
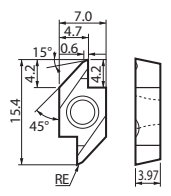
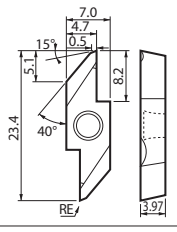
Shape (Right-hand shown)		Description		Dimensions (mm) CW	a	CDX	RE	W1	S	D1	MEGACOAT NANO PLUS PR1725	MEGACOAT NANO PR1535	Applicable Toolholders
		TKFB	12R15005M	1.5	0.25	2.6	< 0.05	3.0	8.7	5.2	●	●	KTKFR…12
			12R28005M	2.8	0.3	4.6	< 0.05				●	●	
			12R28010M				< 0.1				●	●	
		TKFB	16R38005M	3.8	0.3	6.3	< 0.05	4.0	9.5	5.2	●	●	KTKFR…16
			16R38010M				< 0.1				●	●	

• Insert with corner R (RE) dimension expressed with less than sign (e.g. <0.05, <0.1 etc.) indicates models with minus tolerance for corner R (RE)

• For more details on applicable toolholders, see the KYOCERA general product catalog

● : Standard Stock

Stock Items (Back Turning) ABS/ABW

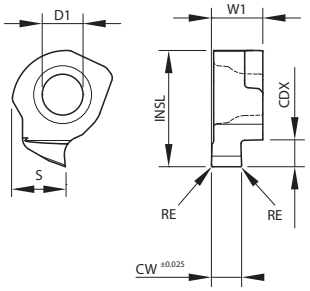
Shape (Right-hand shown)		Description		Dimensions (mm) RE	MEGACOAT NANO PLUS PR1725	PR1705	Applicable Toolholders
		ABS	15R4005M	< 0.05	●	●	AABSR-40F SABSR-40F
			15R4015M	< 0.15	●	●	
		ABW	15R4005M	< 0.05	●	●	AABWR-40F SABWR-40F
			15R4015M	< 0.15	●	●	
		ABW	23R5005M	< 0.05	●		AABWR-50F SABWR-50F
			23R5015M	< 0.15	●	●	

• Insert with corner R (RE) dimension expressed with less than sign (e.g. <0.05, <0.15 etc.) indicates models with minus tolerance for corner R (RE)

• For more details on applicable toolholders, see the KYOCERA general product catalog

● : Standard Stock

Stock Items (Small Internal Grooving) GC

Shape Right-hand shown	Description		Dimensions (mm)							MEGACOAT NANO PLUS		MEGACOAT NANO		Applicable Toolholders
			CW	CDX	RE	W1	INSL	S	D1	PR1725		PR1535		
										R	L	R	L	
 	GC08 R/L	100-005	1.00	1.5	0.05	3.4	7.7	3.5	2.7	●	●	●	●	SIGC R/L0812-EH SIGC R/L0806-WH
		120-005	1.20							●	●	●	●	
		125-005	1.25							●	●	●	●	
		150-010	1.50		0.1					●	●	●	●	
		200-010	2.00							●	●	●	●	
	GC10 R/L	100-005	1.00	2.2	0.05	4.7	9.6	4.4	3.5	●	●	●	●	SIGC R/L1016-EH SIGC R/L1008-WH-L85 SIGCR1008-WH-L100
		120-005	1.20							●	●	●	●	
		125-005	1.25							●	●	●	●	
		145-010	1.45		0.1					●	●	●	●	
		150-010	1.50							●	●	●	●	
		200-010	2.00							●	●	●	●	
		250-020	2.50		0.2					●	●	●	●	
		300-020	3.00							●	●	●	●	
	GC12 R/L	100-005	1.00	2.2	0.05	4.7	11.6	5.4	3.5	●	●	●	●	SIGC R/L1216-EH SIGCR1210-WH-L95 SIGC R/L1210-WH-L110
		120-005	1.20							●	●	●	●	
		125-005	1.25							●	●	●	●	
		145-010	1.45		0.1					●	●	●	●	
		150-010	1.50							●	●	●	●	
		200-010	2.00							●	●	●	●	
		250-020	2.50		0.2					●	●	●	●	
		300-020	3.00							●	●	●	●	

● : Standard Stock

• CDX shows available grooving depth
• For more details on applicable toolholders, see the KYOCERA general product catalog