THE NEW VALUE FRONTIER

KYOCERA

New PVD coating | PR1725 / PR1705

PR1725 / PR1705

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

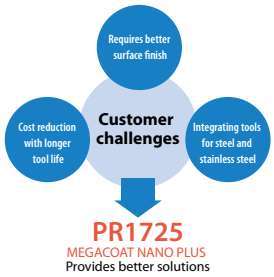
PR1705
Excellent wear resistance and high precision machining of free-cutting steel

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.

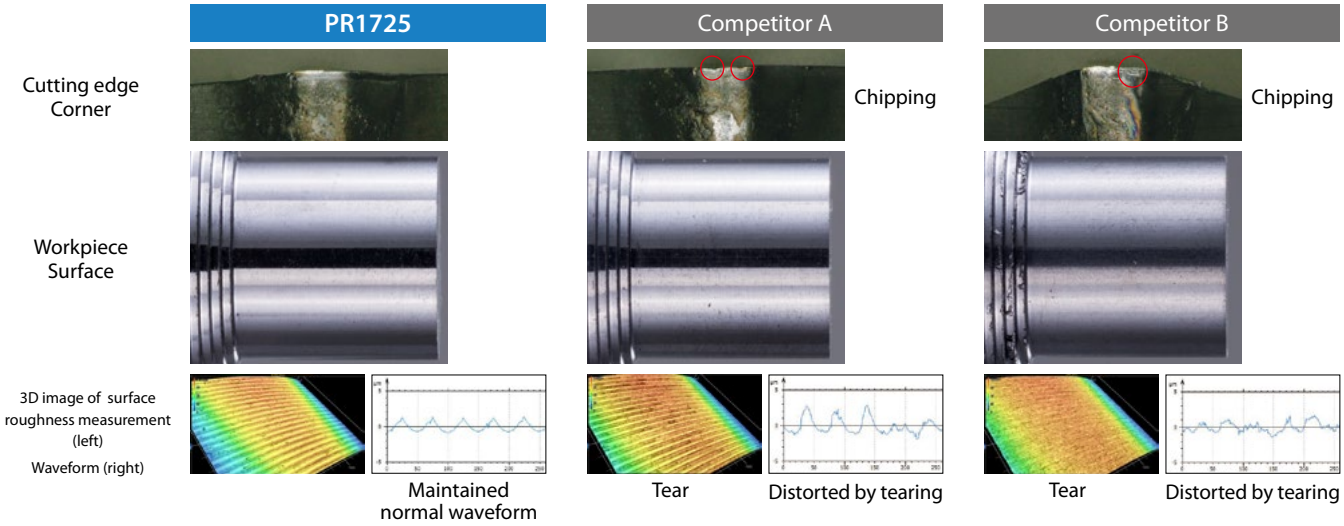


1 MEGACOAT NANO PLUS maintains long tool life and excellent surface finish

Long tool life leads to improved machine operation ratio

Excellent surface finish with no tearing lowers quality control costs

Insert cutting edge wear and quality of surface finish comparison (C45) *After 20 min of machining (Internal evaluation)



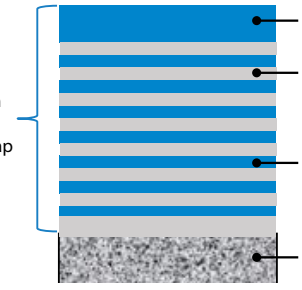
Good surface condition

Cutting conditions: Vc = 150 m/min, ap = 0.5 mm, f = 0.05 mm/rev, wet, workpiece: C45

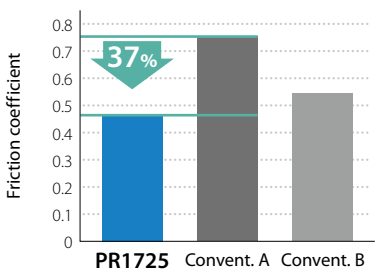
MEGACOAT NANO PLUS

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



Friction 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

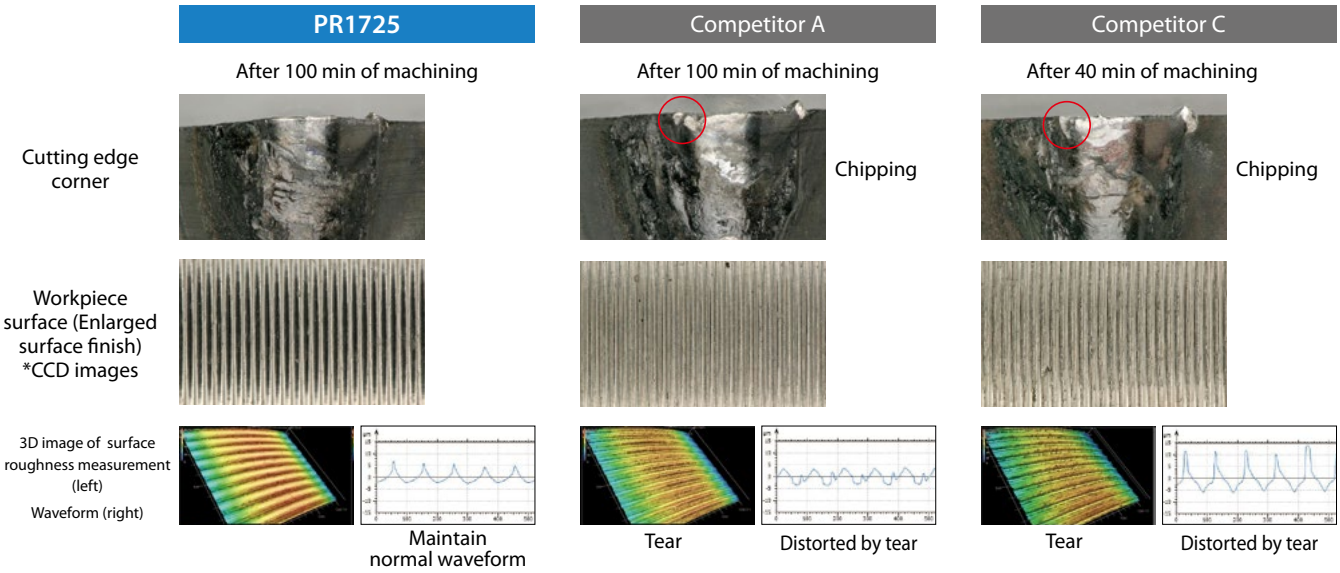
Tough micro-grain carbide substrate provides stable machining.

2 One solution can be used in various workpiece materials

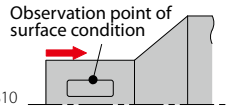
Long tool life for steel, stainless steel and free-cutting steel

Improved management of tools cut the cost

Wear on the cutting edge of insert and quality of the surface finish comparison (Stainless steel: X5CrNi1810) - Internal evaluation



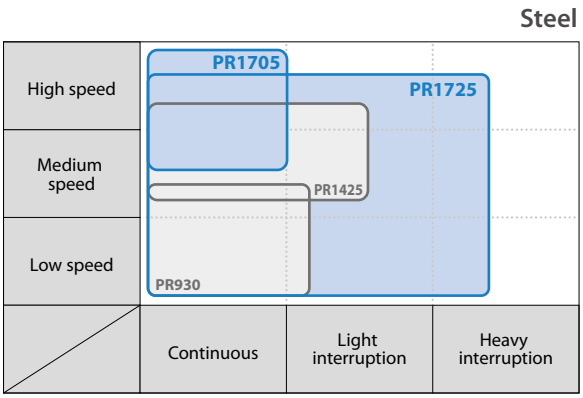
PR1725 shows less damage on the cutting edge and maintains stable tool mark on the workpiece surface



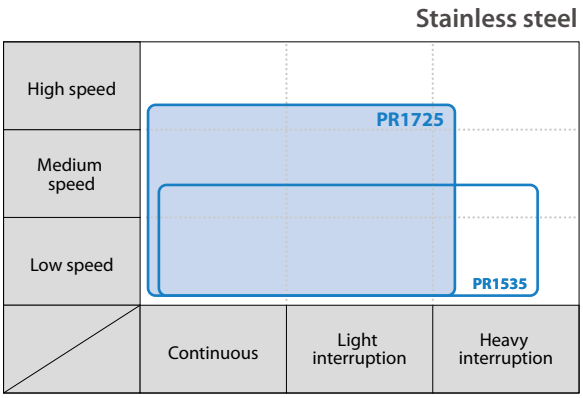
Cutting conditions: Vc = 150 m/min, ap = 0.5 mm, f = 0.1 mm/rev, wet, workpiece: X5CrNi1810

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

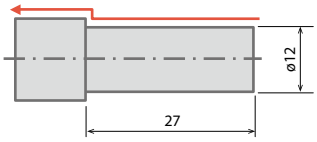


PR1725: For general purpose high-speed machining
PR1535: 1st recommendation for stainless steel machining
Long tool life and high quality machining

Case studies

Shaft 34CrMo4

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** x2

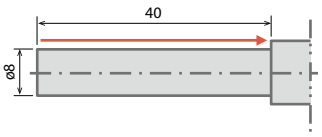
Competitor D (Molded Chipb.) **1,500 pcs/edge**

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

User evaluation

Shaft 42CrMo4

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** x1.6

Competitor E (Molded chipbr.) **150 pcs/edge**

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

User evaluation

Shaft C35

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

Tool life
PR1725 SK chipbreaker **300 pcs/edge** x1.5

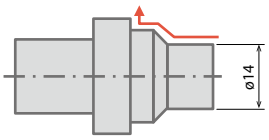
Competitor F (Molded chipbr.) **200 pcs/edge**

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

User evaluation

Pin 20CrMo5

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** x1.3

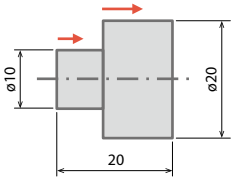
Competitor G (Molded Chipbr.) **150 pcs/edge**

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

User evaluation

Shaft X30Cr13

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** x2

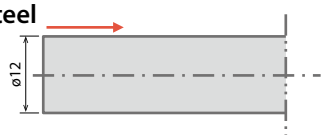
Competitor H (Molded Chipbr.) **300 pcs/edge**

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

User evaluation

Shaft Free-cutting steel

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** x3

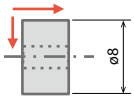
Competitor I (Molded Chipbr.) **1,000 pcs/edge**

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

User evaluation

Shaft C45

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** x2

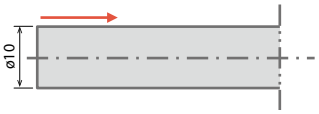
Competitor J (Molded Chipbr.) **1,500 pcs/edge**

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

User evaluation

Pin Alloy tool steel

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

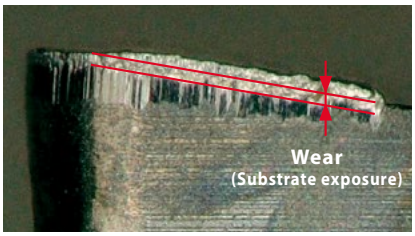
PR1705

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

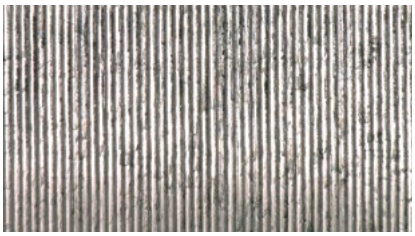
Insert wear and surface finish comparison (9SMnPb28) *After 40 min of machining (Internal evaluation)

PR1705

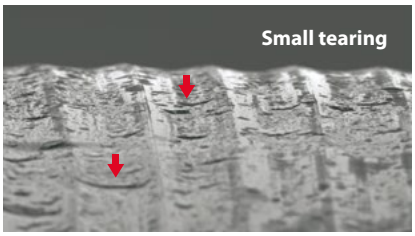
Cutting edge (Flank face)



Workpiece *CCD image



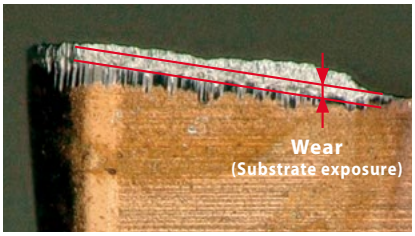
Tearing on workpiece (Surface finish enlarged)



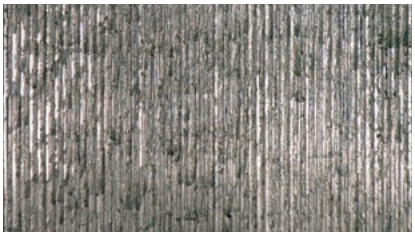
Good surface finish

Competitor K

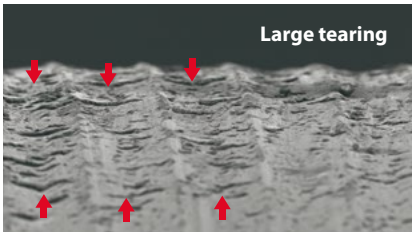
Cutting edge (Flank face)



Workpiece *CCD image



Tearing on workpiece (Surface finish enlarged)

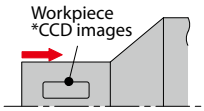


Poor surface finish

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: 9SMnPb28

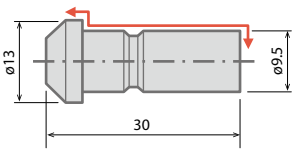
PR1705 improved tool life in continuous machining for steel and electromagnetic soft iron
*For more stable machining, use PR1725



Case studies

Pin 9SMnPb28

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



Tool life

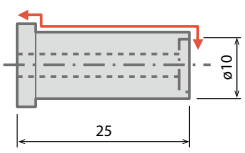
PR1705 MF chipbreaker	4,800 pcs/edge	x1.5
Competitor L (Ground chipbr.)	3,200 pcs/edge	

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

User evaluation

Shaft 9SMnPb28

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	Approx. x1.4
Competitor M (Ground chipbr.)	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.

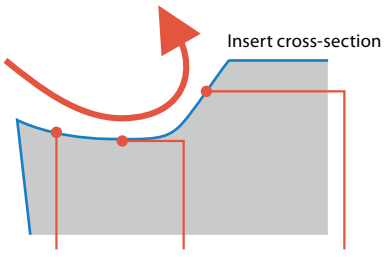
1. Excellent chip control in a wide range of machining applications
2. High-precision sharp edge with periphery grinding
3. Anti-welding properties for improved mirror surface finish

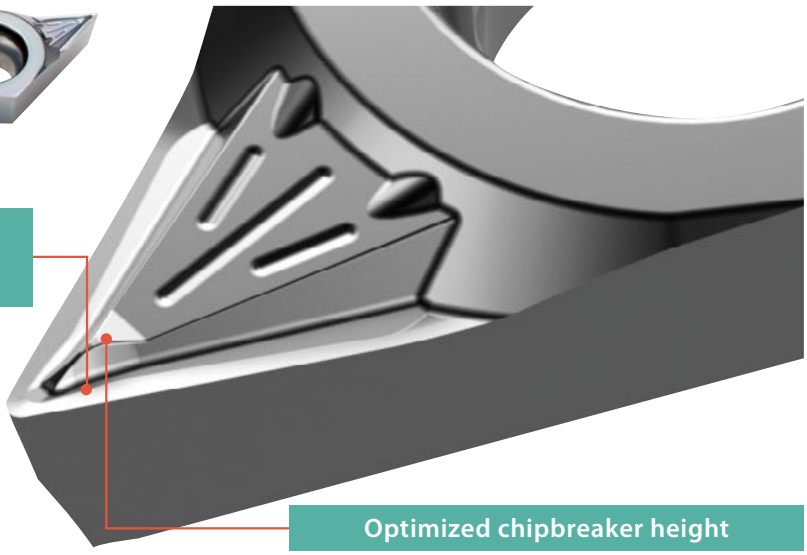
1st recommendation for finishing

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



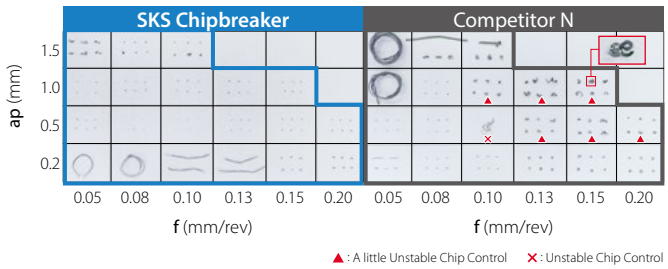


Optimized chipbreaker height

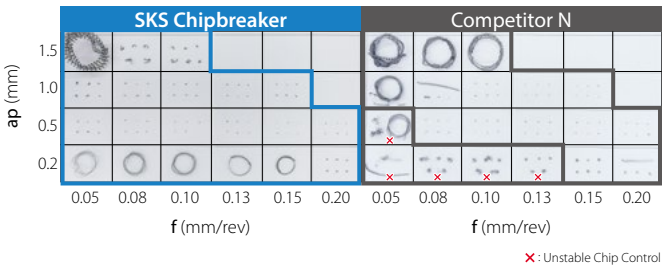
Stabilized chip control when machining at high feed rates
Improved chip evacuation when machining at large D.O.C.

Chip Control Comparison (Internal evaluation)

C45



X5CrNi1810



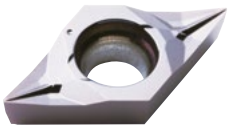
Cutting Conditions : Vc = 100 m/min, Wet, DCGT11T302 Type

SKS chipbreaker showed greater chip control when compared to competitor N

1st recommendation for semi-finishing

SK chipbreaker

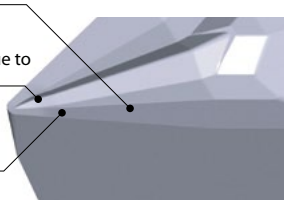
ap: 0.5 to 3.0 mm
The molded chipbreaker maintains both sharpness and chip control



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

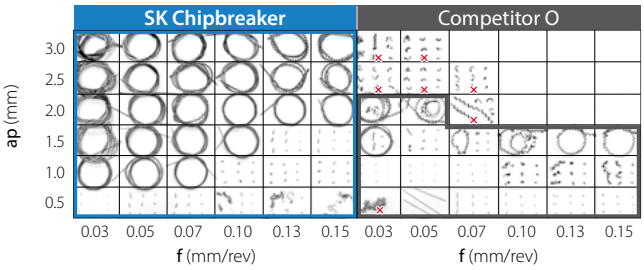
Chip control is improved in small depths of cut due to chipbreaker projecting out to the corner tip

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



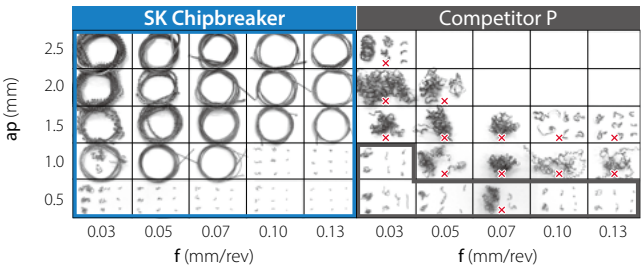
Chip control comparison (internal evaluation)

C45



× : Unstable Chip Control

X5CrNi1810



× : Unstable Chip Control

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

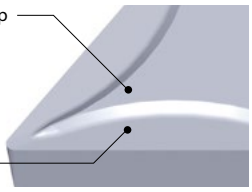
Complementary chipbreakers (Chip control oriented)

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



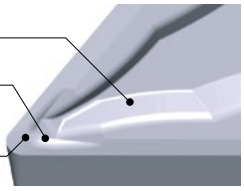
GF chipbreaker for finishing

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

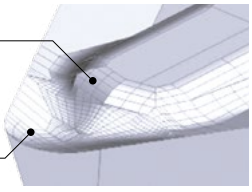


CF chipbreaker for minute ap

ap: 0.02 to 0.2 mm
Excellent chip formation in minute ap

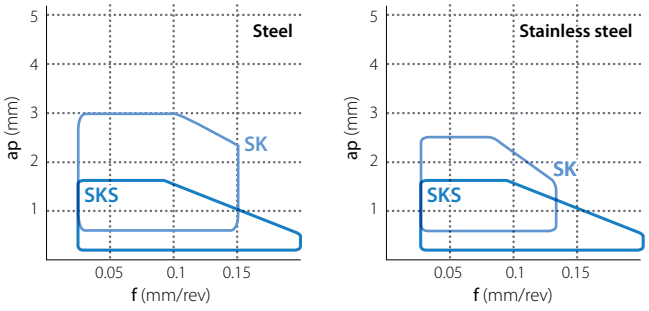
Properly curled chips with special dot design

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

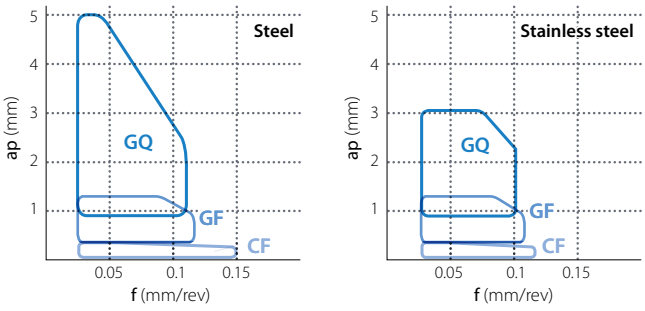


Chipbreaker map

1st recommendation for finishing (low cutting force)



Complementary chipbreakers (chip control oriented)



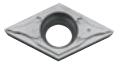
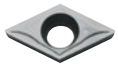
Inserts (Positive)

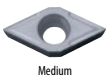
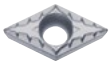
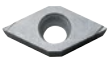
Shape	Description	Dimensions (mm)					MEGACOAT NANO PLUS		MEGA COAT NANO
		I.C.	Thick-ness	Hole	Corner-R (RE)	Relief angel	PR1725	PR1705	PR1535
 Minute DOC / Sharp edge / polished	CCGT 030101MP-CF	3.5	1.4	1.9	< 0.1	7°	●	●	●
	CCGT 030102MP-CF				< 0.2		●	●	●
	CCGT 040101MP-CF	4.3	1.8	2.3	< 0.1	7°	●	●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

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

Inserts (Positive)

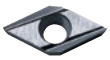
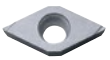
Shape Handed insert shows left-hand	Description		Dimensions (mm)					MEGACOAT NANO PLUS		MEGA COAT NANO
			I.C.	Thick-ness	Hole	Corner-R (RE)	Relief angel	PR1725	PR1705	PR1535
 Medium	CPMH	080204	7.94	2.38	3.5	0.4	11°	●		●
		080208				0.8		●		●
	CPMH	090304	9.525	3.18	4.5	0.4	11°	●		●
		090308				0.8		●		●
 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)					MEGACOAT NANO PLUS		MEGA COAT NANO
			I.C.	Thick-ness	Hole	Corner-R (RE)	Relief angel	PR1725	PR1705	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)

●: Available R : R-hand only

Inserts (Positive)

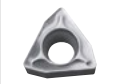
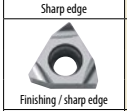
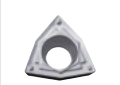
Shape Handed insert shows left-hand	Description		Dimensions (mm)					MEGACOAT NANO PLUS		MEGA COAT NANO
			I.C.	Thick-ness	Hole	Corner-R (RE)	Relief angel	PR1725	PR1705	PR1535
 Low feed / Honed edge	DCGT	11T3005MER-J	9.525	3.97	4.4	< 0.05	7°	R		
		11T301MER-J				< 0.1		R		
		11T302MER-J				< 0.2		R		
		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	110304R/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.	Thick-ness	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	080201R/L	4.76	2.38	2.3	0.1	11°	●		●
		080202R/L				0.2		●	●	●
		080204R/L				0.4		●	●	●
	TPGH	090201R/L	5.56	2.38	3.0	0.1	11°	●		●
		090202R/L				0.2		●	●	●
		090204R/L				0.4		●	●	●
	TPGH	110202R/L	6.35	2.38	3.5	0.2	11°	●	L	●
		110204R/L				0.4		●	L	●
	TPGH	110302R/L	6.35	3.18	3.3	0.2	11°	●	●	●
		110304R/L				0.4		●	●	●
		110308R/L				0.8		●	L	●
	TPGH	160302R/L	9.525	3.18	4.5	0.2	11°	●		●
		160304R/L				0.4		●	L	●
		160308R/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	110302R/L-H	6.35	3.18	3.3	0.2	11°	●		●
		110304R/L-H				0.4		●		●
		110308R/L-H				0.8		●		●
	TPGH	160304R/L-H	9.525	3.18	4.5	0.4	11°	●		●
		160308R/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		
		110301R/L-FSF				0.1		●		
		110302R/L-FSF				0.2		●		
 Finishing / Sharp edge	TPEH	080201MR/L-P	4.76	2.38	2.3	< 0.1	11°	●		●
		080202MR/L-P				< 0.2		●		●
		080204MR/L-P				< 0.4		●		●
	TPEH	090201MR/L-P	5.56	2.38	3.0	< 0.1	11°	●		●
		090202MR/L-P				< 0.2		●		●
		090204MR/L-P				< 0.4		●		●
	TPEH	110301MR/L-P	6.35	3.18	3.3	< 0.1	11°	●		●
		110302MR/L-P				< 0.2		●		●
		110304MR/L-P				< 0.4		●		●
Super fine  Low feed / Sharp edge / precision	TPET	080202ER/L-USF	4.76	2.38	2.3	0.2	11°	●		
	TPET	110301FL-USF	6.35	3.18	3.3	0.1	11°	L		
		110302ER/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) ●: Available R : R-hand only L : L-hand only

Inserts (Positive)

Shape Handed insert shows left-hand	Description		Dimensions (mm)					MEGACOAT NANO PLUS		MEGA COAT NANO
			I.C.	Thick-ness	Hole	Corner-R (RE)	Relief angel	PR1725	PR1705	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)					MEGACOAT NANO PLUS		MEGA COAT NANO
			I.C.	Thick-ness	Hole	Corner-R (RE)	Relief angel	PR1725	PR1705	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	●	

● : Available 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)

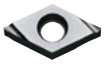
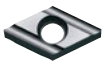
Inserts (Negative)

Shape Handed insert Shows right-hand	Description		Dimensions (mm)				MEGACOAT NANO PLUS	MEGA COAT NANO
			I.C.	Thick-ness	Hole	Corner-R (RE)	PR1725	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	●	●

● : Available 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)

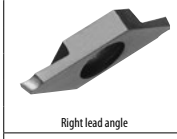
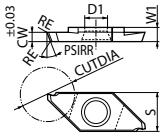
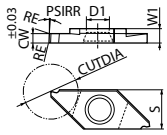
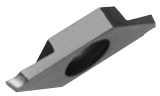
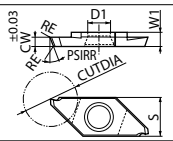
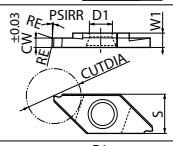
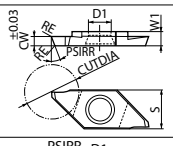
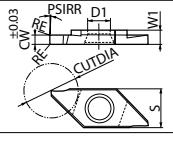
Inserts (Small double-sided tooling)

Shape Handed Insert shows Right-hand	Description		Dimensions (mm)				MEGACOAT NANO PLUS		MEGA COAT NANO
			I.C.	Thickness	Hole	Corner-R (RE)	PR1725	PR1705	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	

● : Available 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

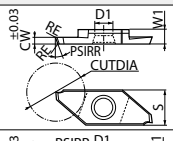
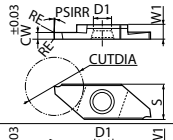
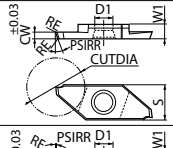
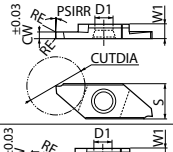
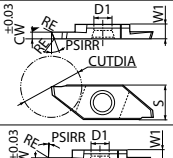
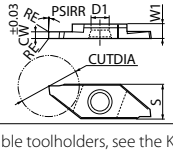
Inserts (Cut-off) TKF12

Shape (Right-hand shown)		Description		Dimensions (mm)						Angle	MEGACOAT NANO PLUS		MEGACOAT NANO		Applicable toolholders
				CW	CUTDIA	RE	W1	S	D1	PSIRR	PR1725		PR1535		
											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

● : Available

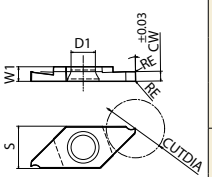
Inserts (Cut-off) TKF16

Shape (Right-hand shown)		Description		Dimensions (mm)						Angle	MEGACOAT NANO PLUS		MEGACOAT NANO		Applicable toolholders
				CW	CUTDIA	RE	W1	S	D1	PSIRR	PR1725		PR1535		
											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

● : Available

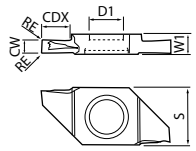
Inserts (Cut-off for sub spindle) TKFS

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

● : Available

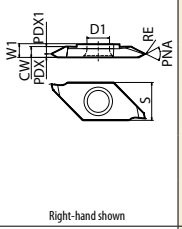
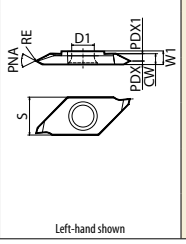
Inserts (grooving and traversing) TKF-GTP chipbreaker

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

● : Available

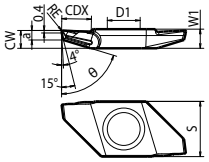
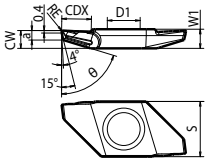
Inserts (Threading) TKFT

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

● : Available

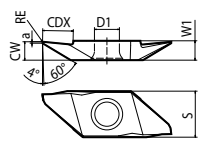
Inserts (Back turning) TKFB-GQ chipbreaker

Shape (Right-hand shown)		Description		Dimensions (mm)								MEGACOAT NANO PLUS	MEGACOAT NANO	Applicable toolholders
				CW	a	CDX	RE	W1	S	D1	θ	PR1725	PR1535	
 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

●: Available

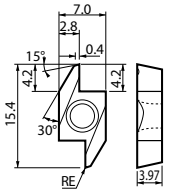
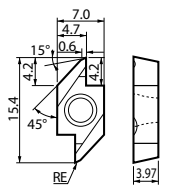
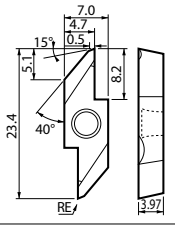
Inserts (Back turning) TKFB

Shape (Right-hand shown)		Description		Dimensions (mm)							MEGACOAT NANO PLUS	MEGACOAT NANO	Applicable toolholders
				CW	a	CDX	RE	W1	S	D1	PR1725	PR1535	
		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

●: Available

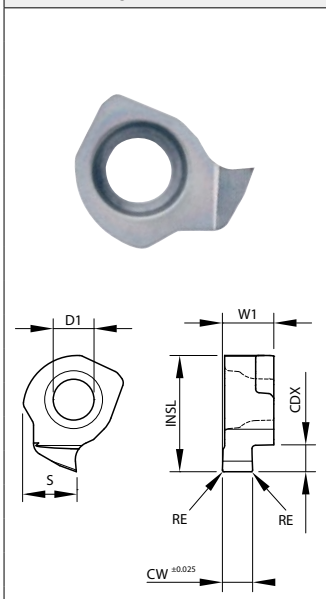
Inserts (Back turning) ABS/ABW

Shape (Right-hand shown)		Description		Dimensions (mm)	MEGACOAT NANO PLUS		Applicable toolholders
				RE	PR1725	PR1705	
		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

●: Available

Inserts (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	
	GC08R/L	100-005	1.00	1.5	0.05	3.4	7.7	3.5	2.7	●	●	●	●	SIGCR/L0812-EH SIGCR/L0806-WH
		120-005	1.20							●	●	●	●	
		125-005	1.25							●	●	●	●	
		150-010	1.50		0.1					●	●	●	●	
		200-010	2.00							●	●	●	●	
	GC10R/L	100-005	1.00	2.2	0.05	4.7	9.6	4.4	3.5	●	●	●	●	SIGCR/L1016-EH SIGCR/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							●	●	●	●	
	GC12R/L	100-005	1.00	2.2	0.05	4.7	11.6	5.4	3.5	●	●	●	●	SIGCR/L1216-EH SIGCR1210-WH-L95 SIGCR/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							●	●	●	●	

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

●: Available