



PR1535

MEGACOAT NANO Insert Grade for Turning



Tough Grade for Heat-Resistant Alloy, Titanium Alloy, and Stainless Steel

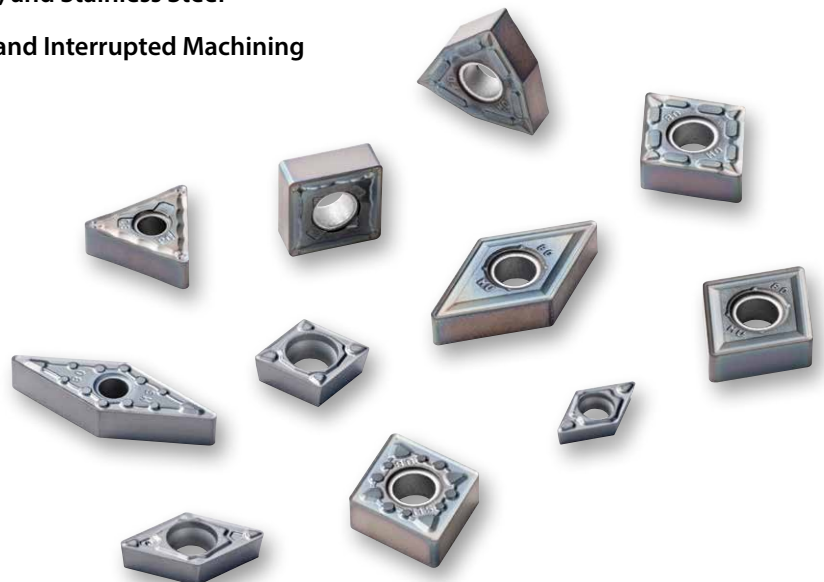
First Choice for Heat-Resistant Alloy, Titanium Alloy, and Stainless Steel

Reduced Sudden Fracturing during Scale Removal and Interrupted Machining

Reliable and Tough Grade for S35 / M35 / P35



SG Chipbreaker
for Roughing Applications



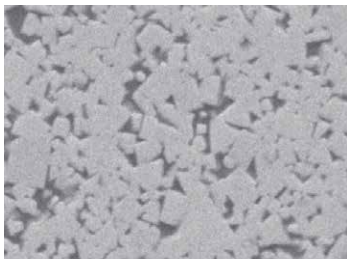
PR1535 MEGACOAT NANO

Fracture resistant with a tough substrate and high heat-resistant coating for stable machining of heat-resistant alloy, titanium alloy, and stainless steel

1 23% Improved Fracture Toughness

An increase in cobalt content yields a substrate with greater toughness. Fracture toughness values are improved by 23% over previous grades.

High Toughness Carbide Base Material

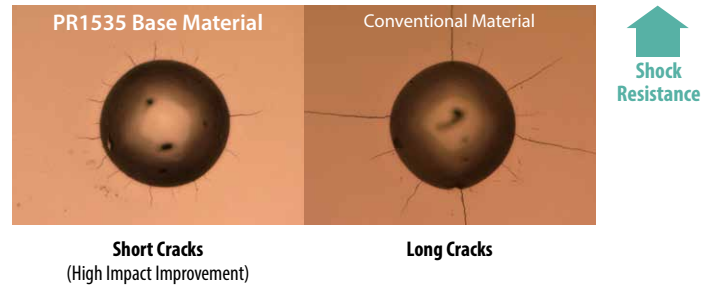


↑
23%
Fracture
Toughness

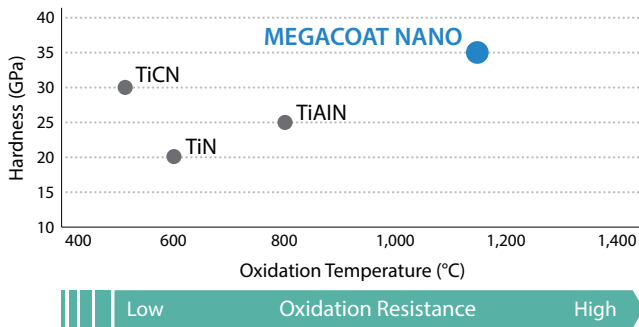
2 Stability Improvement

The coarse grain structure and uniform particle size correspond to improved heat resistance, with conductivity values decreased by 11%. The uniform structure also reduces crack propagation.

Cracking Comparison by Diamond Indenter (In-house Evaluation)

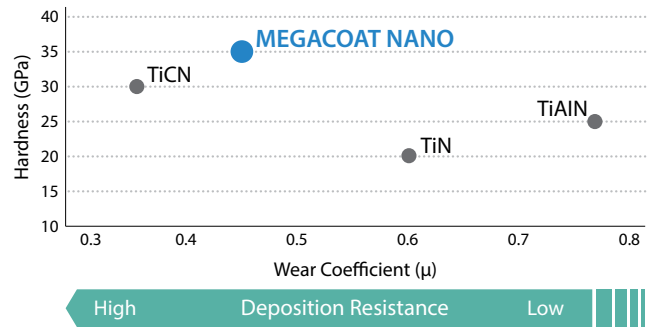


Coating Properties (Abrasion Resistance)



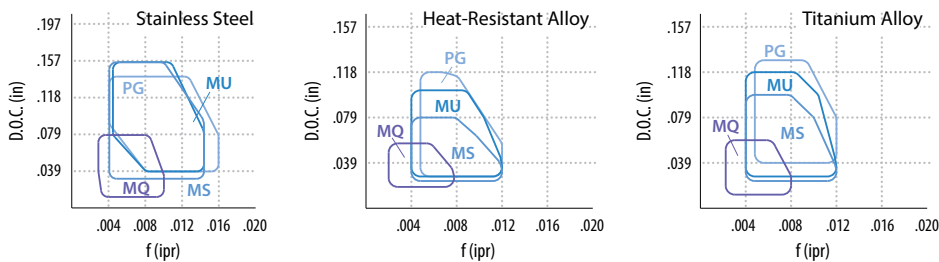
Achieves long tool life with the combination of a tough substrate and a special Nano coating layer

Coating Properties (Deposition Resistance)



Stable machining with excellent wear resistance

Cutting Conditions (External)



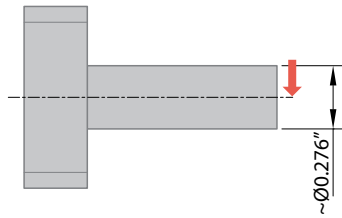
Workpiece Material	Cutting Speed Vc (sfm) Min. ~ Recommended ~ Max.
Stainless Steel	230 ~ 390 ~ 530
Heat-Resistant Alloy	130 ~ 160 ~ 200
Titanium Alloy	130 ~ 160 ~ 200

Case Studies

Ni-base Heat Resistant Alloy

Bolt

Vc = 165 sfm
D.O.C. = 0.118"
0.008 ipr
Wet
CNMG432MS PR1535



Machining Efficiency

PR1535
(MS Chipbreaker) **80 pcs/edge**

Tool Life
2.6x

Competitor A **30 pcs/edge**

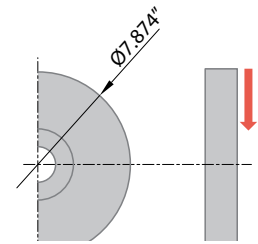
PR1535 (MS chipbreaker) shows 2.6 times longer tool life compared to Competitor A (PVD Coated Carbide).

(User Evaluation)

Ni-base Heat Resistant Alloy

Aircraft Parts

Vc = 165 sfm
D.O.C. = 0.020"
0.004 ipr
Wet
CNMG432MU PR1535



Machining Efficiency

PR1535
(MU Chipbreaker) **1 pcs/edge**

Competitor B **1 pcs/edge**

PR1535-MU Chipbreaker realized the stable machining by preventing the fracture at scaling and interrupted cutting compared with Competitor B (PVD coated).

(User Evaluation)



PR1535

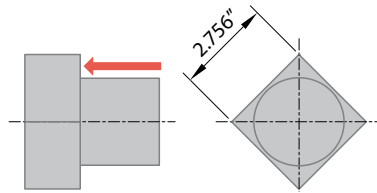


Competitor B

304 Stainless Steel

Square Bar

Vc = 330 sfm
D.O.C. = 0.079"
0.008 ipr
Wet
CNMG432MS PR1535



Machining Efficiency

PR1535
(MS Chipbreaker) **50 pcs/edge**

Tool Life
5x

Competitor C **10 pcs/edge**

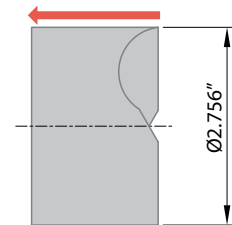
Competitor C fractured due to heavy interrupted machining. PR1535 (MS chipbreaker) shows 5 times longer tool life compared to Competitor C (CVD Coated Carbide).

(User Evaluation)

304 Stainless Steel

Lens Tube

Vc = 395 sfm
D.O.C. = 0.039"
0.006 ipr
Wet
CNMG432MS PR1535



Machining Efficiency

PR1535
(MS Chipbreaker) **80 pcs/edge**

Tool Life
2.6x

Competitor D **30 pcs/edge**

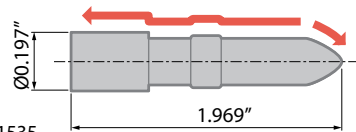
In heavy interrupted machining PR1535 (MS chipbreaker) shows 2.6 times longer tool life compared to Competitor D (PVD Coated Carbide).

(User Evaluation)

S17400 Stainless Steel

Pin

Vc = ~180 sfm
(n = 3,600 rpm)
D.O.C. = 0.004"~0.028"
0.0012 ipr
Wet (oil-based)
DCGT32505MFP-GQ PR1535



Machining Efficiency

PR1535
(GQ Chipbreaker) **1,600 pcs/edge**

Tool Life
1.3x

Competitor E **1,200 pcs/edge**

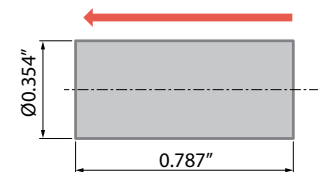
Competitor E had unstable tool life due to sudden defects. PR1535 with the GQ chipbreaker was capable of machining without defects and had improved tool life by 1.3 times that of Competitor E.

(User Evaluation)

440C Stainless Steel

Valve

Vc = 330 sfm
(n = 3,600 rpm)
D.O.C. = 0.004"
0.0024 ipr
Wet (oil-based)
DCGT32505MFP-SK PR1535



Machining Efficiency

PR1535
(SK Chipbreaker) **600 pcs/edge**
















Tool Life
1.3x

















Competitor F **450 pcs/edge**

SK chipbreaker in PR1535 increased tool life by 1.3 times that of Competitor F.

(User Evaluation)

Negative Inserts

● Light Interruption / 1st Choice		M	Stainless Steel		●	
		S	Heat-Resistant Alloy		●	
		Titanium Alloy		●		
Shape	Part Number	Dimensions (in)				MEGACOAT NANO
		IC	Thickness	Hole	Corner-R (re)	PR1535
	CNMG 431MQ	1/2	3/16	0.203	1/64	●
	432MQ				1/32	●
	CNMG 431MS	1/2	3/16	0.203	1/64	●
	432MS				1/32	●
	433MS				3/64	●
	CNMG 431MU	1/2	3/16	0.203	1/64	●
	432MU				1/32	●
	433MU				3/64	●
	CNMG 431PG	1/2	3/16	0.203	1/64	●
	432PG				1/32	●
	433PG				3/64	●
	CNMG 432SG	1/2	3/16	0.203	1/32	●
	433SG				3/64	●
	CNMG 543SG	5/8	1/4	0.250	3/64	●
	544SG				1/16	●
	CNMG 643SG	3/4	1/4	0.313	3/64	●
644SG	1/16				●	
	CNMG 431FP-TK	1/2	3/16	0.203	1/64	○
	432FP-TK				1/32	○
	CNMG 4305MFP-SK	1/2	3/16	0.203	<0.008	●
	431MFP-SK				<1/64	○
	DNMG 431MQ	1/2	3/16	0.203	1/64	●
	432MQ				1/32	●
	DNMG 441MQ	1/2	1/4	0.203	1/64	○
442MQ	1/32				○	
	DNMG 431MS	1/2	3/16	0.203	1/64	●
	432MS				1/32	●
	433MS				3/64	●
	DNMG 441MS	1/2	1/4	0.203	1/64	○
	442MS				1/32	○
	443MS				3/64	○
	DNMG 441MU	1/2	1/4	0.203	1/64	○
	442MU				1/32	○
	DNMG 431MU	1/2	3/16	0.203	1/64	●
432MU	1/32				●	
	DNMG 431PG	1/2	3/16	0.203	1/64	●
	432PG				1/32	●
	433PG				3/64	●
	DNMG 441PG	1/2	1/4	0.203	1/64	○
	442PG				1/32	○
443PG	3/64	○				
	DNMG 432SG	1/2	3/16	0.203	1/32	●
	433SG				3/64	●
	DNMG 4305R-LD	1/2	3/16	0.203	0.008	○
	431R-LD				1/64	○
	DNMG 431FP-TK	1/2	3/16	0.203	1/64	○
	432FP-TK				1/32	○
	DNMG 4305MFP-SK	1/2	3/16	0.203	<0.008	○
	431MFP-SK				<1/64	○




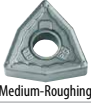







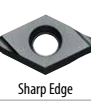




● Light Interruption / 1st Choice		M	Stainless Steel		●	
		S	Heat-Resistant Alloy		●	
		Titanium Alloy		●		
Shape	Part Number	Dimensions (in)				MEGACOAT NANO
		IC	Thickness	Hole	Corner-R (re)	PR1535
	SNMG 432MS	1/2	3/16	0.203	1/32	●
	433MS				3/64	●
	SNMG 432PG	1/2	3/16	0.203	1/32	○
	433PG				3/64	●
	SNMG 432SG	1/2	3/16	0.203	1/32	●
	433SG				3/64	●
	SNMG 643SG	3/4	1/4	0.313	3/64	●
644SG	1/16				●	
	TNMG 331MQ	3/8	3/16	0.150	1/64	●
	332MQ				1/32	●
	TNMG 331MS	3/8	3/16	0.150	1/64	○
	332MS				1/32	●
	333MS				3/64	●
	TNMG 331MU	3/8	3/16	0.150	1/64	●
	332MU				1/32	●
	TNMG 331PG	3/8	3/16	0.150	1/64	●
	332PG				1/32	●
	333PG				3/64	●
	TNMG 332SG	3/8	3/16	0.150	1/32	●
	333SG				3/64	●
	TNMG 432SG	1/2	3/16	0.203	1/32	●
433SG	3/64				●	
	TNMG 3305R-LD	3/8	3/16	0.150	0.008	○
	331R-LD				1/64	○
	TNMG 331FP-TK	3/8	3/16	0.150	1/64	○
	332FP-TK				1/32	○
	TNMG 3305 ^{R/L} -S				3/8	3/16
331 ^{R/L} -S	1/64	○				
332 ^{R/L} -S	1/32	○				
	TNMG 3302MFP-SK	3/8	3/16	0.150	<0.004	○
	3305MFP-SK				<0.008	○
	331MFP-SK				<1/64	○
	VNMG 331MQ	3/8	3/16	0.150	1/64	●
	332MQ				1/32	●
	VNMG 331MS	3/8	3/16	0.150	1/64	●
	332MS				1/32	●
	333MS				3/64	●
	VNMG 331MU	3/8	3/16	0.150	1/64	●
	332MU				1/32	●
	VNMG 331SG	3/8	3/16	0.150	1/64	●
	332SG				1/32	●
	VNMG 3305MFP-SK	3/8	3/16	0.150	<0.008	○
	331MFP-SK				<1/64	●

Insert with corner-R(re) dimension shown with less than sign (e.g. <0.002, <0.004, <0.008 etc.) indicate inserts with minus tolerance for corner-R (re).

● : U.S. Stock ○ : World Express (Shipping: 7-10 Business Days)

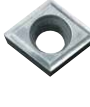






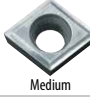




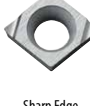

Inserts sold in 10 piece boxes

Negative Inserts

● Light Interruption / 1st Choice		M	Stainless Steel			●
		S	Heat-Resistant Alloy			●
		Titanium Alloy			●	
Shape	Part Number	Dimensions (in)				MEGACOAT NANO
		IC	Thickness	Hole	Corner-R (re)	PR1535
	WNMG 431MQ	1/2	3/16	0.203	1/64	●
	432MQ				1/32	●
	WNMG 431MS	1/2	3/16	0.203	1/64	●
	432MS				1/32	●
	433MS				3/64	●
	WNMG 431MU	1/2	3/16	0.203	1/64	●
	432MU				1/32	●
	WNMG 431PG	1/2	3/16	0.203	1/64	○
	432PG				1/32	●
	433PG				3/64	●
 	WNMG 432SG	1/2	3/16	0.203	1/32	●
433SG	3/64				●	
	CNGU 24202MFR-U	0.295	1/8	0.142	<0.004	○
	24205MFR-U				<0.008	○
	2421MFR-U				<1/64	○
	CNGU 24202MFR-F	0.295	1/8	0.142	<0.004	○
	24205MFR-F				<0.008	○
	2421MFR-F				<1/64	○
	CNGU 24202MFP-SK	0.295	1/8	0.142	<0.004	○
	24205MFP-SK				<0.008	○
	CNMU 24205E-GK	0.295	1/8	0.142	<0.008	○
	2421E-GK				<1/64	○
	DNGU 22202MFR-U	0.276	1/8	0.142	<0.004	○
	22205MFR-U				<0.008	●
	2221MFR-U				<1/64	○
	DNGU 22202MFR-F	0.276	1/8	0.142	<0.004	○
	22205MFR-F				<0.008	○
	2221MFR-F				<1/64	○
	DNGU 22202MFP-SK	0.276	1/8	0.142	<0.004	○
	22205MFP-SK				<0.008	○
	2221MFP-SK				<1/64	○
	DNMU 22205E-GK	0.276	1/8	0.142	0.008	○
	2221E-GK				1/64	○
	TNGU 18202MFR-U	7/32	1/8	0.118	<0.004	○
	18205MFR-U				<0.008	○
	1821MFR-U				<1/64	●
	TNGU 18202MFR-F	7/32	1/8	0.118	<0.004	○
	18205MFR-F				<0.008	○
	1821MFR-F				<1/64	○

Insert with corner-R(re) dimension shown with less than sign (e.g. <0.002, <0.004, <0.008 etc.) indicate inserts with minus tolerance for corner-R (re).















Positive Inserts

● Light Interruption / 1st Choice		M	Stainless Steel			●				
		S	Heat-Resistant Alloy			●				
		Titanium Alloy			●					
Shape	Part Number	Dimensions (in)					MEGACOAT NANO			
		IC	Thickness	Hole	Corner-R (re)	Relief Angle	PR1535			
	CCGT 215013MF	1/4	3/32	0.110	<0.002	○				
	21502MF				<0.004	○				
	21505MF				<0.008	○				
	2151MF				<1/64	○				
	CCGT 325013MF				<0.002	○				
	CCGT 32502MF	3/8	5/32	0.173	<0.004	○				
	32505MF				<0.008	○				
	3251MF				<1/64	○				
	CCGT 21502MP-CK				<0.004	○				
	21505MP-CK				<0.008	○				
	CCGT 32502MP-CK	3/8	5/32	0.173	<0.004	○				
	32505MP-CK				<0.008	○				
	CCGT 110902MP-CF				0.138	0.055	0.075	<0.004	○	
	CCGT 110905MP-CF	0.169	0.071	0.091	<0.004	○				
	141102MP-CF				<0.008	○				
	141105MP-CF				<0.008	○				
	CCGT 21502MFP-GQ	1/4	3/32	0.110	<0.004	○				
	21505MFP-GQ				<0.008	○				
	2151MFP-GQ				<1/64	○				
	CCGT 32502MFP-GQ				<0.004	○				
	32505MFP-GQ				<0.008	○				
	CCGT 3251MFP-GQ	3/8	5/32	0.173	<1/64	○				
	CCGT 21502MFP-GF				<0.004	○				
	21505MFP-GF				<0.008	○				
	2151MFP-GF				<1/64	○				
	CCGT 32502MFP-GF				<0.004	○				
	CCGT 32505MFP-GF	3/8	5/32	0.173	<0.008	○				
	3251MFP-GF				<1/64	○				
	CCGT 21502MFP-SK				<0.004	○				
	21505MFP-SK				<0.008	○				
	2151MFP-SK				<1/64	○				
	CCGT 32502MFP-SK	3/8	5/32	0.173	<0.004	○				
	32505MFP-SK				<0.008	○				
	3251MFP-SK				<1/64	○				
	CCMT 3252				3/8	5/32	0.173	1/32	7°	○
	CCMT 21505PP				1/4	3/32	0.110	0.008	7°	○
	CCMT 2151PP	3/8	5/32	0.173	1/64	○				
	CCMT 32505PP				0.008	○				
	3251PP				1/64	○				
	3252PP				1/32	○				
	CCMT 21505HQ				1/4	3/32	0.110	0.008	7°	○
	CCMT 2151HQ	3/8	5/32	0.173	1/64	○				
	CCMT 32505HQ				0.008	○				
	3251HQ				1/64	○				
	3252HQ				1/32	○				
	CCMT 21505GK				1/4	3/32	0.110	0.008	7°	○
	CCMT 2151GK	3/8	5/32	0.173	1/64	○				
	CCMT 32505GK				0.008	○				
	3251GK				1/64	○				
	CCMT 3251MQ				3/8	5/32	0.173	0.008	7°	●
	3252MQ				1/64	○				
	CCET 1109013M ^{PL} -F	0.138	0.055	0.075	<0.002	○				
	110902ML-F				<0.004	○				
	110905M ^{PL} -F				<0.008	○				
	11091M ^{PL} -F				<1/64	○				
	CCET 141102M ^{PL} -F				<0.004	○				
	CCET 141105M ^{PL} -F	0.169	0.071	0.091	<0.008	○				
	14111M ^{PL} -F				<1/64	○				
	CCET 215013MF ^{PL} -U				<0.002	○				
	21502MF ^{PL} -U				<0.004	○				
	21505MF ^{PL} -U				<0.008	○				
	CCET 325013MF ^{PL} -U	3/8	5/32	0.173	<0.002	○				
	32502MF ^{PL} -U				<0.004	○				
	32505MF ^{PL} -U				<0.008	○				
	3251MF ^{PL} -U				<1/64	○				















● : U.S. Stock ○ : World Express (Shipping: 7-10 Business Days)

Inserts sold in 10 piece boxes

Positive Inserts

● Light Interruption / 1st Choice		M	Stainless Steel				●			
		S	Heat-Resistant Alloy				●			
				Titanium Alloy				●		
Shape	Part Number	Dimensions (in)					MEGACOAT NANO	PR1535		
		IC	Thickness	Hole	Corner-R (re)	Relief Angle				
	CCET 215013MFR-J	1/4	3/32	0.110	<0.002	7°	○			
	21502MF ^{R/L} -J				<0.004		○			
	21505MF ^{R/L} -J				<0.008		○			
	CCET 32502MF ^{R/L} -J				<0.004		○			
	32505MF ^{R/L} -J				<0.008		○			
3251MF ^{R/L} -J	<1/64	○								
	CPMH 25151	5/16	3/32	0.138	1/64	11°	○			
	25152				1/32		○			
	CPMH 321	3/8	1/8	0.177	1/64	11°	○			
	322				1/32		○			
	CPMT 251505PP	5/16	3/32	0.130	0.008	11°	○			
	25151PP				1/64		○			
	CPMT 3205PP				3/8		1/8	0.173	0.008	○
	321PP								1/64	○
322PP	1/32	○								
	CPMT 25151GP	5/16	3/32	0.130	1/64	11°	○			
	CPMT 321GP				3/8		1/8	0.173	1/64	○
322GP	1/32	○								
	CPMH 25151HQ	5/16	3/32	0.138	1/64	11°	○			
	25152HQ				1/32		○			
	CPMH 321HQ				3/8		1/8	0.177	1/64	○
322HQ	1/32	○								
	CPMT 25151XP	5/16	3/32	0.130	1/64	11°	○			
	CPMT 321XP				3/8		1/8	0.173	1/64	○
	322XP								1/32	○
	DCGT 215013MF	1/4	3/32	0.110	<0.002	7°	○			
	21502MF				<0.004		○			
	21505MF				<0.008		○			
	2151MF				<1/64		○			
	DCGT 325013MF				3/8		5/32	0.173	<0.002	○
32502MF	<0.004	○								
32505MF	<0.008	○								
3251MF	<1/64	○								
	DCGT 21502MP-CF	1/4	3/32	0.110	<0.004	7°	○			
	21505MP-CF				<0.008		○			
	DCGT 32502MP-CF				3/8		5/32	0.173	<0.004	○
32505MP-CF	<0.008	○								
	DCGT 21502MP-CK	1/4	3/32	0.110	<0.004	7°	○			
	21505MP-CK				<0.008		○			
	DCGT 32502MP-CK				3/8		5/32	0.173	<0.004	○
32505MP-CK	<0.008	○								
	DCGT 21502MFP-GQ	1/4	3/32	0.110	<0.004	7°	○			
	21505MFP-GQ				<0.008		○			
	2151MFP-GQ				<1/64		○			
	DCGT 32502MFP-GQ				3/8		5/32	0.173	<0.004	○
	32505MFP-GQ								<0.008	○
3251MFP-GQ	<1/64	●								
	DCGT 21502MFP-GF	1/4	3/32	0.110	<0.004	7°	○			
	21505MFP-GF				<0.008		○			
	2151MFP-GF				<1/64		○			
	DCGT 32502MFP-GF				3/8		5/32	0.173	<0.004	○
	32505MFP-GF								<0.008	○
3251MFP-GF	<1/64	○								
	DCGT 21502MFP-SK	1/4	3/32	0.110	<0.004	7°	○			
	21505MFP-SK				<0.008		○			
	2151MFP-SK				<1/64		○			
	DCGT 32502MFP-SK				3/8		5/32	0.173	<0.004	○
	32505MFP-SK								<0.008	○
3251MFP-SK	<1/64	○								
	DCMT 21505MQ	1/4	3/32	0.110	0.008	7°	●			
	2151MQ				1/64		●			
	DCMT 32505MQ				3/8		5/32	0.173	0.008	●
	3251MQ								1/64	●
	3252MQ								1/32	●





















Insert with corner-R(re) dimension shown with less than sign (e.g. <0.002, <0.004, <0.008 etc.) indicate inserts with minus tolerance for corner-R (re).

● Light Interruption / 1st Choice		M	Stainless Steel				●			
		S	Heat-Resistant Alloy				●			
				Titanium Alloy				●		
Shape	Part Number	Dimensions (in)					MEGACOAT NANO	PR1535		
		IC	Thickness	Hole	Corner-R (re)	Relief Angle				
	DCMT 21505PP	1/4	3/32	0.110	0.008	7°	○			
	2151PP				1/64		○			
	DCMT 32505PP	3/8	5/32	0.173	0.008	7°	○			
	3251PP				1/64		○			
	3252PP				1/32		○			
	DCMT 21505GP				1/4		3/32	0.110	0.008	7°
2151GP	1/64	○								
	DCMT 3251GP	3/8	5/32	0.173	1/64	7°	○			
	3252GP				1/32		○			
	DCMT 21505GK	1/4	3/32	0.110	0.008	7°	○			
	2151GK				1/64		○			
	2152GK				1/32		○			
	DCMT 32505GK				3/8		5/32	0.173	0.008	○
3251GK	1/64	○								
3252GK	1/32	●								
	DCMT 21505HQ	1/4	3/32	0.110	0.008	7°	○			
	2151HQ				1/64		○			
	2152HQ				1/32		○			
	DCMT 32505HQ				3/8		5/32	0.173	0.008	○
	3251HQ								1/64	○
3252HQ	1/32	○								
	DCMT 2151XP	1/4	3/32	0.110	1/64	7°	○			
	DCMT 32505XP				3/8		5/32	0.173	0.008	○
	3251XP								1/64	○
	3252XP								1/32	○
	DCET 215013MR-F	1/4	3/32	0.110	<0.002	7°	○			
	21502M ^{R/L} -F				<0.004		○			
	21505M ^{R/L} -F				<0.008		○			
	2151M ^{R/L} -F				<1/64		○			
	DCET 325013MR-F				3/8		5/32	0.173	<0.002	○
32502M ^{R/L} -F	<0.004	○								
32505M ^{R/L} -F	<0.008	○								
3251M ^{R/L} -F	<1/64	○								
	DCET 215013MFR-J	1/4	3/32	0.110	<0.002	7°	○			
	21502MF ^{R/L} -J				<0.004		○			
	21505MF ^{R/L} -J				<0.008		○			
	DCET 325013MFR-J				3/8		5/32	0.173	<0.002	○
	32502MF ^{R/L} -J								<0.004	○
32505MF ^{R/L} -J	<0.008	○								
3251MFR-J	<1/64	○								
	DCET 215013MFR-U	1/4	3/32	0.110	<0.002	7°	○			
	21502MF ^{R/L} -U				<0.004		○			
	21505MF ^{R/L} -U				<0.008		○			
	DCET 325013MFR-U				3/8		5/32	0.173	<0.002	○
	32502MF ^{R/L} -U								<0.004	○
32505MF ^{R/L} -U	<0.008	○								
3251MFR-U	<1/64	○								
	JCET 110905M ^{R/L} -F	0.138	0.055	0.075	<0.008	7°	○			
	11091M ^{R/L} -F				<1/64		○			
	TBGT 12102MP-CF	5/32	1/16	0.091	<0.004	5°	○			
	12105MP-CF				<0.008		○			
	TBET 121013M ^{R/L}	5/32	1/16	0.091	<0.002	5°	○			
	12102M ^{R/L}				<0.004		○			
	12105M ^{R/L}				<0.008		○			
	1211M ^{R/L}				<1/64		○			
	TPGT 151502MP-CF	3/16	3/32	0.091	<0.004	11°	○			
	151505MP-CF				<0.008		○			
	TPGT 181502MP-CF	7/32	3/32	0.118	<0.004	11°	○			
	181505MP-CF				<0.008		○			
	TPMT 181505PP				7/32		3/32	0.118	0.008	○
18151PP	1/64	○								
TPMT 2205PP	1/4	1/8	0.130	0.008		○				
221PP				1/64	○					
222PP	1/32	○								























● : U.S. Stock ○ : World Express (Shipping: 7-10 Business Days)

Inserts sold in 10 piece boxes

Positive Inserts

● Light Interruption / 1st Choice		M		Stainless Steel				●	
		S		Heat-Resistant Alloy				●	
				Titanium Alloy				●	
Shape	Part Number	Dimensions (in)					MEGACOAT NANO PR1535		
		IC	Thickness	Hole	Corner-R (re)	Relief Angle			
	TPMT 181505GP	7/32	3/32	0.118	0.008	11°	○		
	TPMT 18151GP				1/64		○		
	TPMT 221GP	1/4	1/8	0.130	1/64	11°	○		
	TPMT 321GP	3/8	1/8	0.177	1/64	11°	○		
	TPMT 181505HQ	7/32	3/32	0.118	0.008	11°	○		
	TPMT 18151HQ				1/64		○		
	TPMT 2205HQ				0.008		○		
	TPMT 221HQ	1/4	1/8	0.130	1/64	11°	●		
	TPMT 222HQ				1/32		●		
	TPMT 3205HQ				0.008		○		
	TPMT 321HQ	3/8	1/8	0.177	1/64	11°	●		
	TPMT 322HQ				1/32		○		
	TPMT 18151XP	7/32	3/32	0.118	1/64	11°	○		
	TPMT 221XP				1/64		○		
	TPMT 222XP	1/4	1/8	0.130	1/32	11°	●		
	TPMT 321XP				1/64		○		
	TPMT 322XP	3/8	1/8	0.177	1/32	11°	○		
	TPGH 151502 ^{PL}				0.004		○		
	TPGH 151505 ^{PL}	3/16	3/32	0.091	0.008	11°	○		
	TPGH 15151 ^{PL}				1/64		○		
	TPGH 181502 ^{PL}				0.004		○		
	TPGH 181505 ^{PL}	7/32	3/32	0.118	0.008	11°	○		
	TPGH 18151 ^{PL}				1/64		○		
	TPGH 21505 ^{PL}				0.008		○		
	TPGH 2151 ^{PL}	1/4	3/32	0.138	1/64	11°	○		
	TPGH 2205 ^{PL}				0.008		○		
	TPGH 221 ^{PL}	1/4	1/8	0.130	1/64	11°	○		
	TPGH 222 ^{PL}				1/32		○		
	TPGH 3205 ^{PL}				0.008		○		
	TPGH 321 ^{PL}	3/8	1/8	0.177	1/64	11°	○		
	TPGH 322 ^{PL}				1/32		○		
	TPGH 181502L-H				0.004		○		
	TPGH 181505L-H	7/32	3/32	0.118	0.008	11°	○		
	TPGH 18151L-H				1/64		○		
	TPGH 2205 ^{PL} -H				0.008		○		
	TPGH 221 ^{PL} -H	1/4	1/8	0.130	1/64	11°	○		
	TPGH 222 ^{PL} -H				1/32		○		
	TPGH 321 ^{PL} -H	3/8	1/8	0.177	1/64	11°	○		
	TPGH 322 ^{PL} -H				1/32		○		
	VBMT 2205PP				0.008		○		
	VBMT 221PP	1/4	1/8	0.110	1/64	5°	○		
	VBMT 222PP				1/32		○		
	VBMT 331PP				1/64		○		
	VBMT 332PP	3/8	3/16	0.173	1/32	5°	○		
	VBMT 333PP				3/64		●		
	VBMT 221GP	1/4	1/8	0.110	1/64	5°	○		
	VBMT 221HQ				1/64		○		
	VBMT 222HQ	1/4	1/8	0.110	1/32	5°	○		
	VBMT 2205VF				0.008		○		
	VBMT 221VF	1/4	1/8	0.110	1/64	5°	○		
	VBMT 222VF				1/32		○		
	VBET 22013M ^{PL} -F				<0.002		○		
	VBET 2202M ^{PL} -F	1/4	1/8	0.110	<0.004	5°	○		
	VBET 2205M ^{PL} -F				<0.008		○		
	VBET 22013M ^{PL} -Y				<0.002		○		
	VBET 2202M ^{PL} -Y	1/4	1/8	0.110	<0.004	5°	○		
	VBET 2205M ^{PL} -Y				<0.008		○		
	VBET 221M ^{PL} -Y				<1/64		○		

Insert with corner-R(re) dimension shown with less than sign (e.g. <0.002, <0.004, <0.008 etc.) indicate inserts with minus tolerance for corner-R (re).

● Light Interruption / 1st Choice		M		Stainless Steel				●	
		S		Heat-Resistant Alloy				●	
				Titanium Alloy				●	
Shape	Part Number	Dimensions (in)					MEGACOAT NANO PR1535		
		IC	Thickness	Hole	Corner-R (re)	Relief Angle			
	VCGT 2202MP-CF	1/4	1/8	0.110	<0.004	7°	○		
	VCGT 2205MP-CF				<0.008		○		
	VCGT 2202MFP-CF	1/4	1/8	0.110	<0.004	7°	○		
	VCGT 2205MFP-CF				<0.008		○		
	VCMT 151505PP	3/16	3/32	0.091	0.008	7°	○		
	VCMT 15151PP				1/64		○		
	VCMT 331PP	3/8	3/16	0.173	1/64	7°	●		
	VCMT 332PP				1/32		○		
	VCMT 151505VF	3/16	3/32	0.091	0.008	7°	○		
	VCMT 15151VF				1/64		○		
	VCMT 151505HQ	3/16	3/32	0.091	0.008	7°	○		
	VCMT 15151HQ				1/64		○		
	VCET 2202M ^{PL} -F	1/4	1/8	0.110	<0.004	7°	○		
	VCET 2205M ^{PL} -F				<0.008		○		
	VCET 221M ^{PL} -F				<1/64		○		
	VCET 22013M ^{PL} -Y				<0.002		○		
	VCET 2202M ^{PL} -Y	1/4	1/8	0.110	<0.004	7°	○		
	VCET 2205M ^{PL} -Y				<0.008		○		
	VCET 221M ^{PL} -Y				<1/64		○		
	VPGT 2202MP-CF	1/4	1/8	0.110	<0.004	11°	○		
	VPGT 2205MP-CF				<0.008		●		
	VPGT 151502MP-CK	3/16	3/32	0.091	<0.004	11°	○		
	VPGT 151505MP-CK				<0.008		○		
	VPGT 2202MP-CK	1/4	1/8	0.110	<0.004	11°	○		
	VPGT 2205MP-CK				<0.008		○		
	VPGT 2202MFP-GF	1/4	1/8	0.110	<0.004	11°	○		
	VPGT 2205MFP-GF				<0.008		○		
	VPET 151502M ^{PL} -F	3/16	3/32	0.091	<0.004	11°	○		
	VPET 151505M ^{PL} -F				<0.008		○		
	VPET 22013MR-F				<0.002		○		
	VPET 2202MR-F	1/4	1/8	0.110	<0.004	11°	○		
	VPET 2205M ^{PL} -F				<0.008		○		
	VPET 151502MF ^{PL} -U	3/16	3/32	0.091	<0.004	11°	○		
	VPET 151505MF ^{PL} -U				<0.008		○		
	VPET 22013MF ^{PL} -U				<0.002		○		
	VPET 2202MF ^{PL} -U	1/4	1/8	0.110	<0.004	11°	○		
	VPET 2205MF ^{PL} -U				<0.008		○		
	VPET 22013MFR-J				<0.002		○		
	VPET 2202MF ^{PL} -J	1/4	1/8	0.110	<0.004	11°	○		
	VPET 2205MF ^{PL} -J				<0.008		○		
	WBGT 12102MP ^{PL} -CF	5/32	1/16	0.091	<0.004	5°	○		
	WBGT 12105MP ^{PL} -CF				<0.008		○		
	WBMT 12105 ^{PL} -DP	5/32	1/16	0.091	<0.008	5°	○		
	WBMT 1211 ^{PL} -DP				<1/64		○		
	WBMT 151505 ^{PL} -DP	3/16	3/32	0.091	<0.008	5°	●		
	WBET 15151L-DP				<1/64		○		
	WBET 121013ML-F				<0.002		○		
	WBET 12102M ^{PL} -F	5/32	1/16	0.091	<0.004	5°	○		
	WBET 12105M ^{PL} -F				<0.008		○		
	WBET 1211M ^{PL} -F				<1/64		○		
	WBET 151502ML-F	3/16	3/32	0.091	<0.004	5°	○		
	WBET 151505ML-F				<0.008		○		
	WBET 15151M ^{PL} -F				<1/64		○		

● : U.S. Stock ○ : World Express (Shipping: 7-10 Business Days)

Inserts sold in 10 piece boxes



KYOCERA Precision Tools

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Hendersonville, NC 28792
Customer Service | 800.823.7284 - Option 1
Technical Support | 800.823.7284 - Option 2



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