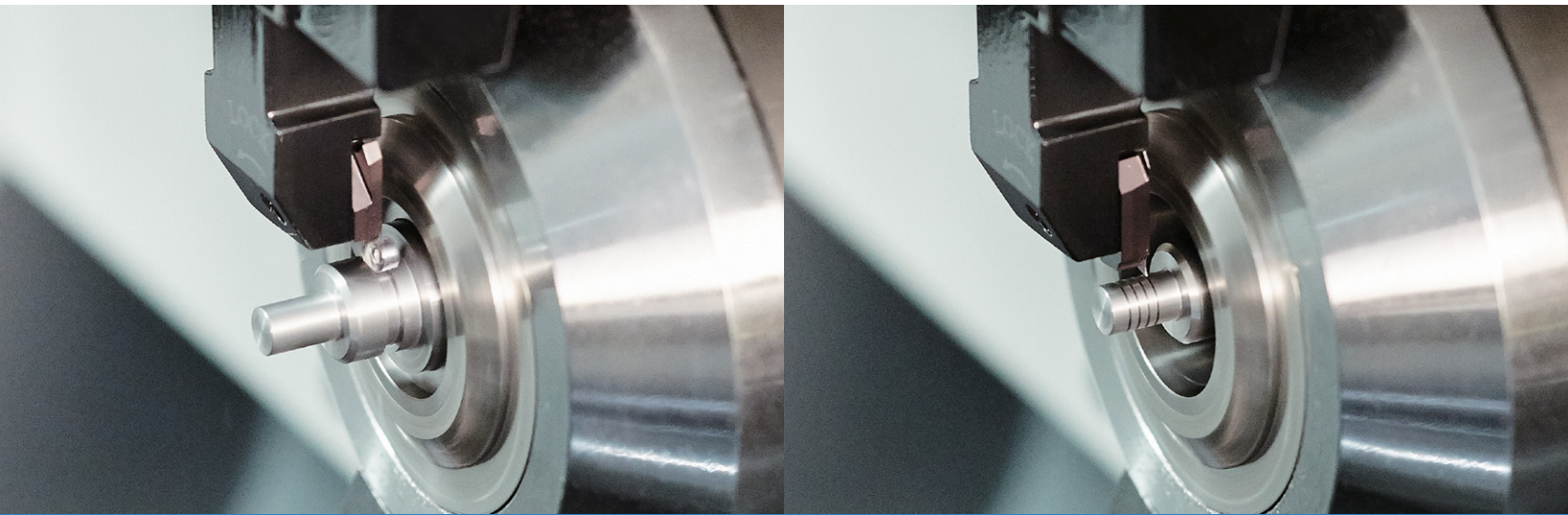




GBF

Grooving Tools for Small Parts Machining



Low Cutting Force with a Large Rake Angle and High Precision Grooving

Groove Widths from 0.25 mm

Maximum Groove Depths up to 3 mm

Long Tool Life and Stable Machining with MEGACOAT Series

GW15 for Non-ferrous Metal Machining Added to the Lineup



GBF

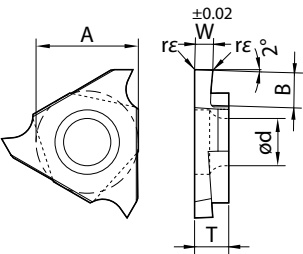
Low Cutting Force with a Large Rake Angle

High-precision Grooving with Insert Width Tolerance of ± 0.02 mm

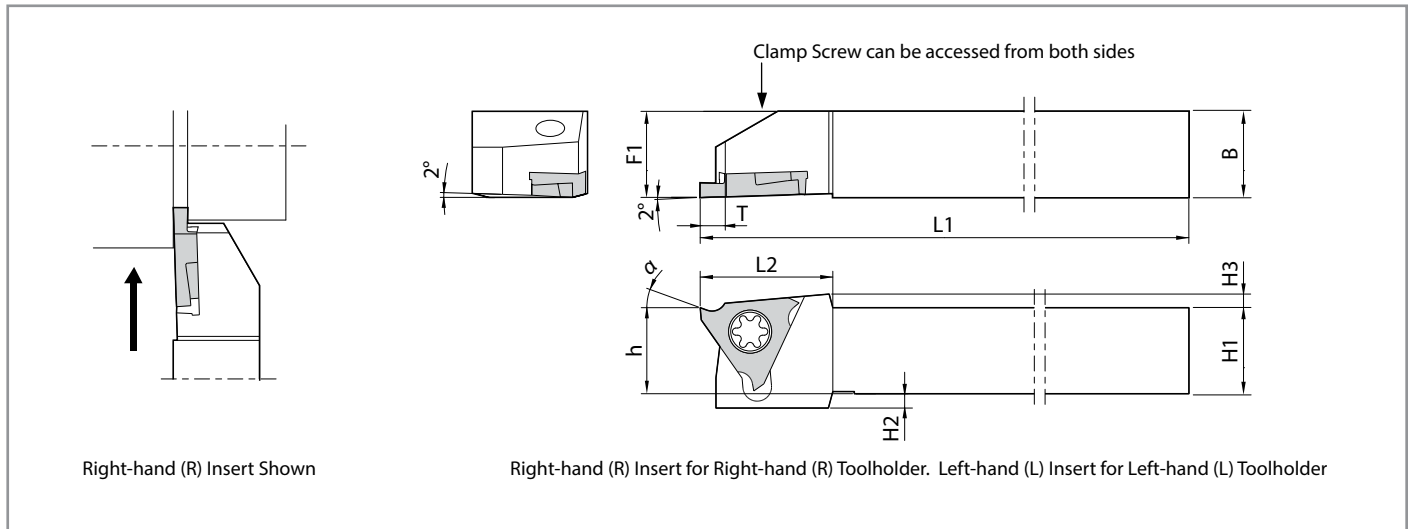
- 1 Groove Widths from 0.25 mm
Maximum Groove Depths up to 3 mm
- 2 Chattering Resistance with a Large Rake Angle
(20° When Installed in Holder)
- 3 Long Tool Life and Stable Machining with MEGACOAT Series
GW15 for Non-ferrous Machining Added to the Lineup

GBF

Inserts

Description	A	T	Ød					
GBF32	9.525	3.18	4.4					
Shape	Description	Dimensions (mm)			MEGACOAT	MEGACOAT NANO	Carbide	
		W	B	rε	PR1215	PR1535	GW15	
	GBF32 ^{RL}	025-005	0.25	0.6	0.05	○	○	○
		030-005	0.30	0.8		○	○	○
		033-005	0.33	0.8		○	○	○
		043-005	0.43	1.0		○	○	○
		050-005	0.50	1.2		○	○	○
		053-005	0.53	1.2		○	○	○
		065-005	0.65	2.0		○	○	○
		075-005	0.75	2.0		○	○	○
		080-005	0.80	2.0		○	○	○
		095-005	0.95	2.0		○	○	○
		100-005	1.00	2.0		○	○	○
		110-005	1.10	2.0		○	○	○
		120-005	1.20	2.0		○	○	○
		125-010	1.25	0.1		○	○	○
		130-010	1.30	0.1	○	○	○	
		140-010	1.40	2.7	○	○	○	
		145-010	1.45	2.7	○	○	○	
		150-010	1.50	2.7	○	○	○	
		165-010	1.65	0.1	○	○	○	
		170-010	1.70	0.1	○	○	○	
		175-010	1.75	0.1	○	○	○	
		200-010	2.00	3.0	○	○	○	
		225-010	2.25	3.0	○	○	○	
		250-010	2.50	3.0	○	○	○	
		300-010	3.00	3.0	○	○	○	

The maximum machining diameter is $\phi 51$ mm (Please check cautions on back cover)



Toolholder Dimensions

Description	Stock		Dimensions (mm)							Parts		
	R	L	H1 = h	H2	H3	B	L1	L2	T ^{*1}	Clamp Screw	Wrench	
KGBF ^{R/L}	1010JX-16F	○	○	10	4	2.1	10	120	18.5	3	SB-4070TRW	FT-8
	1212JX-16F	○	○	12	2		12					
	1616JX-16F	○	○	16	-		16					
	2020JX-16F	○	○	20	-		20					

*1 Dimension T shows the distance from the toolholder to the cutting edge. Dimension B shows available grooving depth
The maximum machining diameter is Ø51 mm (Please see cautions on back cover)

Recommended Cutting Conditions ★ 1st Recommendation ☆ 2nd Recommendation

Workpiece	Recommended Insert Grade (Cutting Speed Vc: sfm)			[1] Grooving Feed Rate (ipr) [2] Traversing Feed Rate (ipr) [3] Max DOC for Traversing (in)			
	MEGACOAT	MEGACOAT NANO	Carbide	GBF32 ^{R/L} 025 – 053	GBF32 ^{R/L} 065 – 095	GBF32 ^{R/L} 100 – 145	GBF32 ^{R/L} 150 – 300
	PR1215	PR1535	GW15				
Carbon Steel	★ 260 - 590	☆ 230 - 530	-	[1] 0.0004 – 0.0020 [2] Not Recommended [3] Not Recommended	[1] 0.0008 – 0.0028 [2] Not Recommended [3] Not Recommended	[1] 0.0012 – 0.0031 [2] 0.0012 – 0.0024 [3] MAX. 0.0079	[1] 0.0012 – 0.0031 [2] 0.0012 – 0.0024 [3] MAX. 0.0079
Alloy Steel	★ 260 - 590	☆ 230 - 530	-	[1] 0.0004 – 0.0016 [2] Not Recommended [3] Not Recommended	[1] 0.0008 – 0.0024 [2] Not Recommended [3] Not Recommended	[1] 0.0012 – 0.0028 [2] 0.0008 – 0.0020 [3] MAX. 0.0079	[1] 0.0012 – 0.0028 [2] 0.0008 – 0.0020 [3] MAX. 0.0079
Stainless Steel	☆ 200 - 430	★ 160 - 390	-	[1] 0.0004 – 0.0016 [2] Not Recommended [3] Not Recommended	[1] 0.0008 – 0.0024 [2] Not Recommended [3] Not Recommended	[1] 0.0012 – 0.0028 [2] 0.0008 – 0.0020 [3] MAX. 0.0079	[1] 0.0012 – 0.0028 [2] 0.0008 – 0.0020 [3] MAX. 0.0079
Cast Iron	-	-	★ 200 - 330	[1] 0.0004 – 0.0020 [2] Not Recommended [3] Not Recommended	[1] 0.0008 – 0.0028 [2] Not Recommended [3] Not Recommended	[1] 0.0012 – 0.0031 [2] 0.0012 – 0.0024 [3] MAX. 0.0079	[1] 0.0012 – 0.0031 [2] 0.0012 – 0.0024 [3] MAX. 0.0079
Aluminum Alloy	-	-	★ 490 - 1,310	[1] 0.0004 – 0.0020 [2] Not Recommended [3] Not Recommended	[1] 0.0008 – 0.0028 [2] Not Recommended [3] Not Recommended	[1] 0.0012 – 0.0031 [2] 0.0012 – 0.0024 [3] MAX. 0.0079	[1] 0.0012 – 0.0031 [2] 0.0012 – 0.0024 [3] MAX. 0.0079
Brass	-	-	★ 490 - 980	[1] 0.0004 – 0.0016 [2] Not Recommended [3] Not Recommended	[1] 0.0008 – 0.0028 [2] Not Recommended [3] Not Recommended	[1] 0.0012 – 0.0028 [2] 0.0008 – 0.0020 [3] MAX. 0.0079	[1] 0.0012 – 0.0028 [2] 0.0008 – 0.0020 [3] MAX. 0.0079

MEGACOAT NANO PR1535

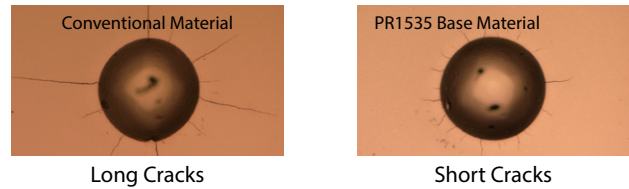
PR1535 achieves long tool life and stable machining of stainless steel with the combination of a tough substrate and a special nano layer coating

- 1 An increase in cobalt content yields a substrate with greater toughness
* Fracture toughness values are improved by 23% over previous grades
- 2 The coarse grain structure and uniform particle size correspond to improved heat resistance, with conductivity values decreased by 11%
- 3 MEGACOAT NANO for Long Tool Life and Stable Machining

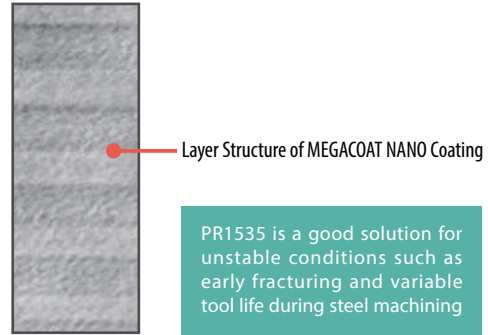
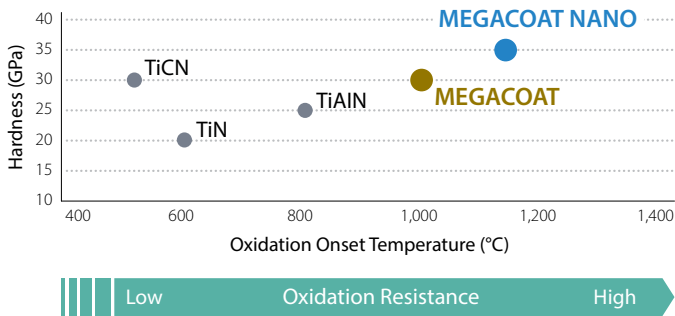
↑
23%
Fracture
Toughness*

Cracking Comparison by Diamond Indentor (In-house Evaluation)

↑
Shock
Resistance



Coating Properties



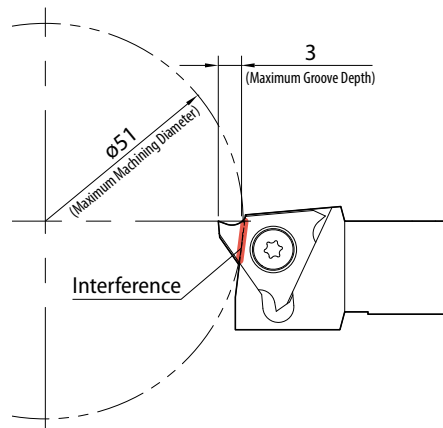
Precautions

GBF and GBA Compatibility

- 1 GBF will fit KGBA/KGBAS holders
Caution: The maximum groove depth for KGBA/KGBAS holders is 2.5 mm
- 2 GBA inserts will also fit KGBF-F holders
Caution: The rake angle after installation in the toolholder is 11°
 - 2.5 mm groove depth is available on workpiece diameters up to 200 mm max
 - 2.2 mm groove depth is available on workpiece diameters over 200 mm

KGBF-F Holder with GBF Insert Maximum Machining Diameter

The maximum machining diameter is $\varnothing 51$ mm.
The workpiece interferes with the holder at $\varnothing 51$ mm workpiece diameter or larger.



KYOCERA Precision Tools, Inc.

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