



GBA

Grooving with 3 Cutting Edges



Smooth Chip Evacuation with Molded Chipbreaker

Large Lineup of Chipbreakers and Insert Grades

Smooth Chip Control with GM Chipbreaker



NEW

PR1625 Grade
for Steel and Stainless Steel

GBA Grooving with 3 Cutting Edges

Smooth Chip Control with Molded Chipbreakers Along with Excellent Surface Finish
Stable Machining with PR1625 Insert Grades

1 Multiple Insert Grades Cover a Wide Variety of Applications

Recommended Insert Grades for Steel

General Purpose: PR1215

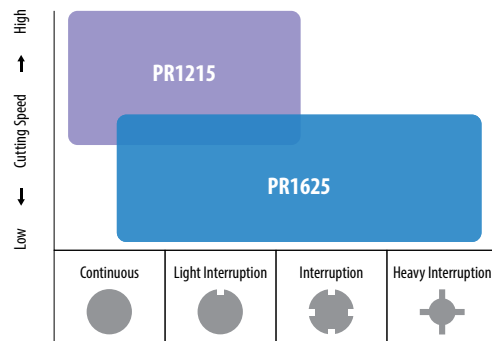
Surface Finish Oriented: TN620

Stable Machining Oriented: PR1625

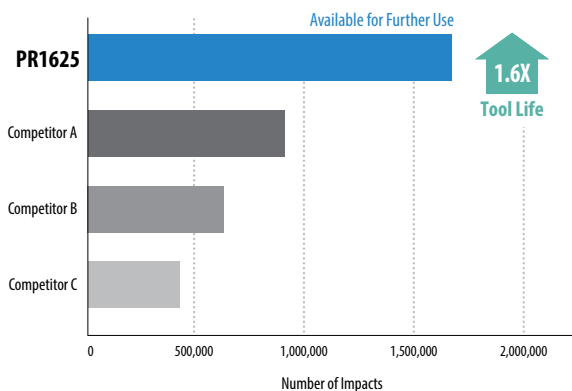


PR1625

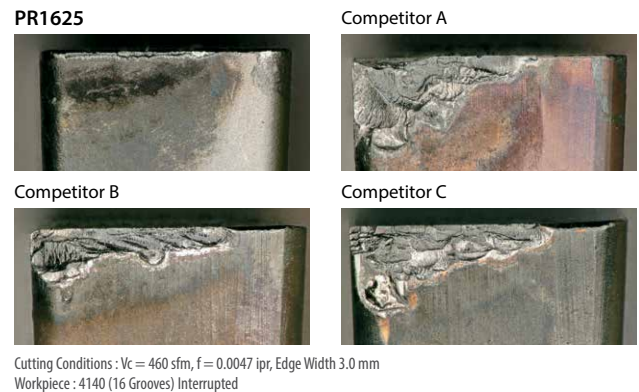
The new PR1625 has high hardness and toughness with a highly stable carbide base material and MEGACOAT NANO coating technology for excellent welding resistance



Fracture Resistance Comparison (Internal Evaluation)



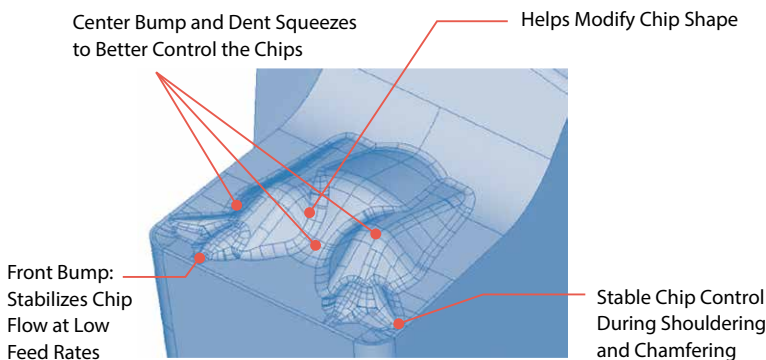
Wear Resistance Comparison (Internal Evaluation)



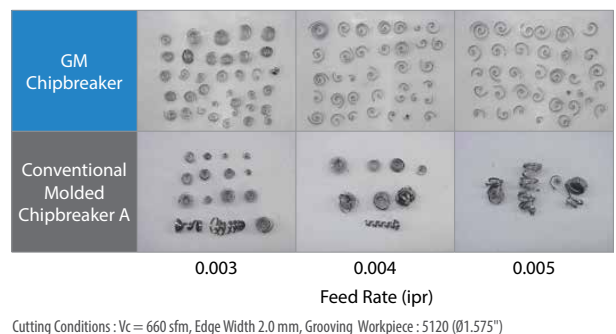
2 Smooth Chip Control with GM Chipbreaker

Smooth Chip Control Due to Bump Placement on the Chipbreaker
Groove Widths from 1.4 mm

Multi-Bump Design



Chip Control Comparison (Internal Evaluation)



GBA Inserts (Inch Size)

Part Number	A	T	Ød	Usage Classification	
				● : Light Interruption / 1st Choice	○ : Light Interruption / 2nd Choice
GBA32_	0.375	0.125	0.173	P	Carbon Steel / Alloy Steel
GBA43_	0.500	0.187	0.217	M	Stainless Steel
GBA43 ¾ 480	0.500	0.197	0.217	K	Cast Iron
				N	Non-ferrous Metals
				S	Titanium Alloy
				H	Hard Materials (≤40HRC)
					Hard Materials (≥40HRC)

Insert Right-handed Insert Shown	Part Number	Dimensions (in)			MEGACOAT Cermets	MEGACOAT	Applicable Toolholders
		W	B	re	PV7040	PR1215	
	GBA32% 031N	0.031	0.079	0.002	○	●	KGBA% ...-3 KGBA% ...-16 KGBAS% ...-3 KGBAS% ...-16
	041N	0.041	0.079	0.002	●	●	
	047N	0.047	0.079	0.008	○	●	
	058N	0.058	0.079	0.008	●	●	
	062N	0.062	0.079	0.008	●	●	
	078N	0.078	0.098	0.008	●	●	
	094N	0.094	0.098	0.008	○	●	KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15
	GBA43% 031N	0.031	0.079	0.008	●	●	
	047N	0.047	0.079	0.008	○	●	
	062N	0.062	0.138	0.008	●	●	
	072N	0.072	0.138	0.008	○	●	
	078N	0.078	0.138	0.008	○	●	
	088N	0.088	0.138	0.008	●	●	KGBA% ...-4-25 KGBA% ...-22-25 KGBA% ...-4-25T KGBA% ...-22-25T5 KGBAS% ...-4-25 KGBAS% ...-22-25 KGBAS% ...-22-25T5
	094N	0.094	0.157	0.012	●	●	
	097N	0.097	0.157	0.012	●	●	
	105N	0.105	0.157	0.012	○	●	
	109N	0.109	0.157	0.012		○	
	110N	0.110	0.157	0.012	●	○	
	125N	0.125	0.157	0.012	○	●	KGBA% ...-4-35 KGBA% ...-22-35 KGBAS% ...-4-35 KGBAS% ...-22-35
	141N	0.141	0.197	0.012		●	
142N	0.142	0.197	0.012	○	●		
156N	0.156	0.197	0.016	○	●		
172N	0.172	0.197	0.016		●		
178N	0.178	0.197	0.016	○	●		
188N	0.188	0.197	0.016		●		

Dimension B shows available grooving depth

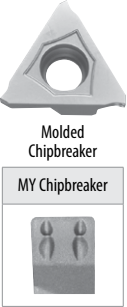
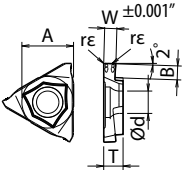
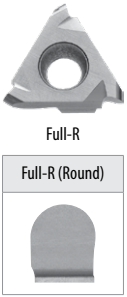
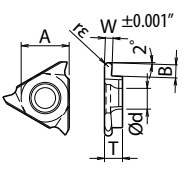
● : U.S. Stock ● : U.S. Stock (R-hand Only) ● : U.S. Stock (L-hand Only) ○ : World Express (Shipping: 7-10 Business Days)

Inserts sold in 5 piece boxes

Rake Angle (α) After Installment of GBA (External Grooving Toolholders)

GBA32%○○○N		GBA43%○○○N	
α	Insert Grade	α	Insert Grade
10°	PV7040, PR1215	10°	PV7040, PR1215

GBA Inserts (Inch Size)

Part Number	A	T	Ød (in)	P	Carbon Steel / Alloy Steel	●	Usage Classification ● : Light Interruption / 1st Choice ○ : Light Interruption / 2nd Choice ● : Continuous / 1st Choice ○ : Continuous / 2nd Choice	
				M	Stainless Steel	●		
				K	Cast Iron			
				N	Non-ferrous Metals			
				S	Titanium Alloy	●		
				H	Hard Materials (≤40HRC) Hard Materials (≥40HRC)	●		
Insert		Part Number		Dimensions (in)			MEGACOAT	Applicable Toolholders
Right-handed Insert Shown				W	B	re	PR1215	
 <p>Molded Chipbreaker MY Chipbreaker</p>		GBA43% 078MYN	0.078	0.138	0.008	●	KGBA% ...4-15 KGBA% ...22-15 KGBAS% ...4-15 KGBAS% ...22-15	
		094MYN	0.094	0.157	0.012	●	KGBA% ...4-25 KGBA% ...22-25 KGBA% ...4-25T KGBA% ...22-25T5 KGBAS% ...4-25 KGBAS% ...22-25 KGBAS% ...22-25T5	
		125MYN	0.125	0.157	0.012	●	KGBA% ...4-35 KGBA% ...22-35 KGBAS% ...4-35 KGBAS% ...22-35	
		156MYN	0.156	0.197	0.016	●	KGBA% ...4-15 KGBA% ...22-15 KGBAS% ...4-15 KGBAS% ...22-15	
 <p>Full-R Full-R (Round)</p>		GBA32R 031R	0.062	0.079	0.031	●	KGBA% ...-3 KGBA% ...-16 KGBAS% ...-3 KGBAS% ...-16	
		047R	0.094	0.098	0.047	●	KGBA% ...4-15 KGBA% ...22-15 KGBAS% ...4-15 KGBAS% ...22-15	
		GBA43% 031R	0.062	0.138	0.031	●	KGBA% ...4-25 KGBA% ...22-25 KGBA% ...4-25T KGBA% ...22-25T5 KGBAS% ...4-25 KGBAS% ...22-25 KGBAS% ...22-25T5	
		047R	0.094	0.157	0.047	●	KGBA% ...4-35 KGBA% ...22-35 KGBAS% ...4-35 KGBAS% ...22-35	
		062R	0.125	0.157	0.062	●	KGBA% ...4-15 KGBA% ...22-15 KGBAS% ...4-15 KGBAS% ...22-15	
		078R	0.156	0.197	0.078	○	KGBA% ...4-35 KGBA% ...22-35 KGBAS% ...4-35 KGBAS% ...22-35	
094R	0.188	0.197	0.094	○				

Dimension B shows available grooving depth

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

Inserts sold in 5 piece boxes

Rake Angle (α) After Installment of GBA-MY (External Grooving Toolholders)

α	Insert Part Number
15°	GBA43% 078MYN }
	GBA43% 125MYN
14°	GBA43% 156MYN

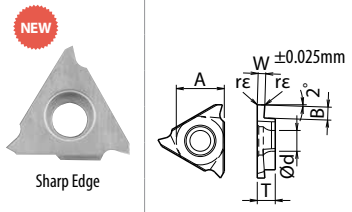
α shows the rake angle at the center of the edge width after installing insert

Rake Angle (α) After Installment of GBA-R (External Grooving Toolholders)

GBA43%○○○R (Full-R)		
	Insert Grade	Full-R Part Number
10°	PV7040, PR1215	031R ~ 062R
14°	PV7040, PR1215	078R ~ 094R

GBA Inserts (Metric Size)

Part Number	A	T	Ød	P	Material	Usage Classification
GBA32_	9.525	3.18	4.4	P	Carbon Steel / Alloy Steel	●
GBA43_	12.70	4.76	5.5	M	Stainless Steel	○
GBA43% 480	12.70	5.00	5.5	K	Cast Iron	●
				N	Non-ferrous Metals	○
				S	Titanium Alloy	●
				H	Hard Materials (≤40HRC)	○
				H	Hard Materials (≥40HRC)	○

Insert Right-handed Insert Shown	Part Number	Dimensions (mm)			Cermet	Applicable Toolholders	
		W	B	re			
	GBA32% 050-005F *1	0.50	1.0	0.05	○	KGBA% ...-3 KGBA% ...-16 KGBAS% ...-3 KGBAS% ...-16 KIGBA% ...-3 (Internal) KIGBA% ...-16 (Internal)	
	075-005F	0.75	2.0		0.2		○
	095-005F	0.95					○
	100-005F	1.00		○			
	125-020F	1.25		○			
	145-020F	1.45		○			
	150-020F	1.50		○			
	175-020F	1.75	2.5	○			
	200-020F	2.00		○			
	250-020F	2.50		○			
	GBA43% 125-020F	1.25	2.0	0.2	○	KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)	
	145-020F	1.45			○		
	150-020F	1.50			○		
	175-020F	1.75			3.5		○
	185-020F	1.85					○
	200-020F	2.00					○
	230-020F	2.30	○				
	250-030F	2.50	4.0	0.3	○	KGBA% ...-4-25T KGBA% ...-22-25T5 KGBAS% ...-22-25T5 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)	
	265-030F	2.65			○		
	280-030F	2.80			○		
	300-030F	3.00			○		
	330-030F	3.30			○		
	350-030F	3.50			5.0		0.4
	400-040F	4.00	○				
	430-040F	4.30	Ⓜ				
	450-040F	4.50	Ⓜ				
	480-040F	4.80	Ⓜ				


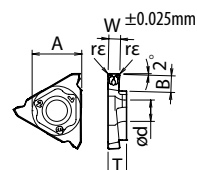
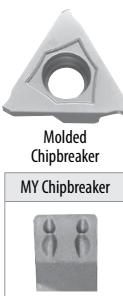
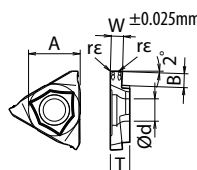
Dimension B shows available grooving depth

○ : World Express (Shipping: 7-10 Business Days) Ⓜ : World Express (R-hand Only)

*1 : The edge width tolerance of GBA32% 050-005F : 0.50^{+0.05mm}/_{-0.05mm}

Inserts sold in 10 piece boxes

GBA Inserts (Metric Size)

Part Number	A	T	Ød	(mm)	P	Carbon Steel / Alloy Steel	NEW	NEW	NEW	NEW	NEW	Usage Classification ● : Light Interruption / 1st Choice ○ : Light Interruption / 2nd Choice ● : Continuous / 1st Choice ○ : Continuous / 2nd Choice		
					M	Stainless Steel	K	Cast Iron	N	Non-ferrous Metals	S		Titanium Alloy	H
GBA32_	9.525	3.18	4.4											
GBA43_	12.70	4.76	5.5											
GBA43% 480	12.70	5.00	5.5											
Insert Right-handed Insert Shown	Part Number	Dimensions (mm)			Cermets		MEGA COAT NANO	MEGA COAT	PVD Coated Carbide		Applicable Toolholders			
		W	B	ε	TN620	TN6020	PR1625	PR1215	PR1115	PR930				
 Molded Chipbreaker GM Chipbreaker		GBA43% 140-010GM	1.40	3.5	0.1	○			○			KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		
		150-020GM	1.50		0.2	○		●	●					
		175-020GM	1.75			○			○					
		185-020GM	1.85			○			○					
		200-020GM	2.00			○		●	Ⓟ					
		230-020GM	2.30			○			●					
		250-030GM	2.50	5.0	0.3	○		●	Ⓟ			KGBA% ...-4-25T KGBA% ...-22-25T5 KGBAS% ...-22-25T5 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		
		265-030GM	2.65			○			○					
		300-030GM	3.00			○		●	○					
		330-030GM	3.30			○			○					
350-030GM	3.50	5.0	0.4	○						KGBA% ...-4-35 KGBA% ...-22-35 KGBAS% ...-4-35 KGBAS% ...-22-35 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)				
400-040GM	4.00			○		●	●							
 Molded Chipbreaker MY Chipbreaker		GBA43% 175-020MY	1.75	3.5	0.2		○		●	○	○	KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		
		185-020MY	1.85				○		●	○	○			
		200-020MY	2.00			Ⓟ		●	Ⓟ	Ⓟ				
		230-020MY	2.30			○		○	○	●	○			
		250-030MY *1	2.50	4.0	0.3		Ⓟ					★2		
			5.0						●	○	Ⓟ	★1		
		265-030MY *1	2.65	4.0	0.3		●					★2		
			5.0						○				★1	
		300-030MY *1	3.00	4.0	0.3		○			Ⓟ	○	○	★2	
			5.0									Ⓟ	○	★1
		330-030MY *1	3.30	4.0	0.3		Ⓟ						★2	
			5.0									○	○	Ⓟ
		350-030MY	3.50	5.0	0.4			○			○	○	○	KGBA% ...-4-35 KGBA% ...-22-35 KGBAS% ...-4-35 KGBAS% ...-22-35 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)
		400-040MY	4.00					○		●	Ⓟ	Ⓟ	Ⓟ	

Dimension B shows available grooving depth

● : U.S. Stock Ⓟ : U.S. Stock (R-hand Only) ● : U.S. Stock (L-hand Only)

○ : World Express (Shipping: 7-10 Business Days) Ⓟ : World Express (R-hand Only) ● : World Express (L-hand Only)

*1 : Available grooving depth is different based on grade

Inserts sold in 10 piece boxes

★1: KGBA% ...-4-25T, KGBA% ...-22-25T5, KGBAS% ...-22-25T5, KIGBA% ...-4, KIGBA% ...-22

★2: KGBA% ...-4-25T, KGBA% ...-22-25T5, KGBAS% ...-22-25T5, KGBA% ...-4-25, KGBA% ...-22-25, KGBAS% ...-4-25, KGBAS% ...-22-25, KIGBA% ...-4, KIGBA% ...-22

Rake Angle (α) After Installment of GBA-GM

(External Grooving Toolholders)

α	Insert Part Number	α	Insert Part Number
10°	GBA43% 150-020GM	12°	GBA43% 300-030GM GBA43% 400-040GM
15°	GBA43% 175-020GM		
	GBA43% 265-030GM		

α shows the rake angle at the center of the edge width after installing insert

Rake Angle (α) After Installment of GBA-MY

(External Grooving Toolholders)

α	Insert Part Number
15°	GBA43% 175-020MY
	GBA43% 350-030MY
14°	GBA43% 400-040MY

α shows the rake angle at the center of the edge width after installing insert

GBA Inserts (Metric Size)

Part Number	A	T	Ød	(mm)	P	M	K	N	S	H	NEW										Usage Classification
					Carbon Steel / Alloy Steel	Stainless Steel	Cast Iron	Non-ferrous Metals	Titanium Alloy	Hard Materials (≤40HRC)	Hard Materials (≥40HRC)	●	○	●	●	○	○	○	○	○	
Insert		Part Number	Dimensions (mm)			MEGA COAT Cermet	Cermet			MEGA COAT NANO	MEGA COAT	PVD Coated Carbide			Carbide	Applicable Toolholders					
Right-handed Insert Shown			W	B	rc	PV7040	TN620	TN90	PR1625	PR1215	PR1115	PR905	PR930	KW10							
<p>Full-R</p> <p>Full-R (Round)</p>	GBA32R	200-100R	2.00	2.5	1.00												KGBA% ...-3 KGBA% ...-16 KGBAS% ...-3 KGBAS% ...-16 KIGBA% ...-3 (Internal) KIGBA% ...-16 (Internal)				
		300-150R	3.00		1.50														KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		
	GBA43%	100-050R	1.00	2.0	0.50					●	Ⓡ	Ⓛ	○					KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)			
		150-075R	1.50	3.5	0.75					●	○	○	○			Ⓡ		KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)			
		200-100R	2.00		1.00						●	Ⓡ	Ⓛ	○					KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		
		250-125R	2.50	4.0	1.25						●	○	○					KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)			
		300-150R	3.00		1.50							○							KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		
	GBA43%	100-050RF	1.00	2.0	0.50						○							KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)			
		150-075RF	1.50	3.5	0.75						○							KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)			
		200-100RF	2.00		1.00						○								KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		
		250-125RF	2.50	4.0	1.25						○							KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)			
		300-150RF	3.00		1.50							○							KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		
	GBA43%	100-050R	1.00	2.0	0.50													KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)			
		150-075R	1.50	3.5	0.75													KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)			
		200-100R	2.00		1.00														KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		
		250-125R	2.50	4.0	1.25													KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)			
		300-150R	3.00		1.50														KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)		

Dimension B shows available grooving depth

● : U.S. Stock Ⓡ : U.S. Stock (R-hand Only) Ⓛ : U.S. Stock (L-hand Only)

GBA43% ...RF : Sharp Edge Type

○ : World Express (Shipping: 7-10 Business Days) Ⓡ : World Express (R-hand Only) Ⓛ : World Express (L-hand Only)

Inserts sold in 10 piece boxes

★1: KGBA% ...-4-25T, KGBA% ...-22-25T5, KGBAS% ...-22-25T5, KGBA% ...-4-25, KGBA% ...-22-25, KGBAS% ...-4-25, KGBAS% ...-22-25, KIGBA% ...-4, KIGBA% ...-22

Rake Angle (α) After Installment of GBA (External Grooving Toolholders)

GBA32% ○○○-○○○		GBA43% ○○○-○○○		GBA43% ○○○-○○○R (Full-R)	
α	Insert Grade	α	Insert Grade	Insert Grade	Full-R Part Number
10°	TN620, TN90, PV7040, PR930 PR1115, PR1215, PR905 KPD001, KPD010	0°	KBN510, KBN525	10°	TN620, TN90, PV7040, PR930 PR1115, PR1215, PR905
		10°	TN620, TC40N, TN90, PV7040 PR930, PR1115, PR1215, PR905 KPD001, KPD010	14°	TN620, TN90, PV7040, PR930 PR1115, PR1215, PR905
20°	KW10	20°	KW10	KW10	050R ~ 150R 200R 050R ~ 200R

GBA Inserts (Metric Size)

Part Number	A	T	Ød	Material				Usage Classification						
				P	M	K	N	S	H	●	○	●	○	
GBA32_	9.525	3.18	4.4	Carbon Steel / Alloy Steel	Stainless Steel									
GBA43_	12.70	4.76	5.5	Cast Iron	Non-ferrous Metals					●				
GBA43% 480	12.70	5.00	5.5	Titanium Alloy	Hard Materials (≤40HRC)					●				
				Hard Materials (≥40HRC)		○	●							

Insert Right-handed Insert Shown	Part Number	Dimensions (mm)			CBN		PCD		Applicable Toolholders	
		W	B	rE	KBN510	KBN525	KPD001	KPD010		
<p>GBA32 S = 1.7mm GBA43 S = 1.9mm</p>	GBA32R 125-010	1.25	2.0	0.1				○	KGBA% ...-3 KGBA% ...-16 KGBAS% ...-3 KGBAS% ...-16 KIGBA% ...-3 (Internal) KIGBA% ...-16 (Internal)	
	150-010	1.50						○		○
	GBA43% 125-010	1.25	2.0	0.1				○	KGBA% ...-4-15 KGBA% ...-22-15 KGBAS% ...-4-15 KGBAS% ...-22-15 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)	
	125-020			0.2	○	Ⓛ				
	150-010	1.50	3.5	0.1			○	○		
	150-020			0.2	●	Ⓢ				
	200-010	2.00	3.5	0.1			●	○		
	200-020			0.2	●	○				
	250-010	2.50	4.0	0.1			○	○		KGBA% ...-4-25 KGBA% ...-22-25 KGBA% ...-4-25T KGBA% ...-22-25T5 KGBAS% ...-4-25 KGBAS% ...-22-25 KGBAS% ...-22-25T5 KIGBA% ...-4 (Internal) KIGBA% ...-22 (Internal)
	250-020			0.2	○	○				
	300-010	3.00	4.0	0.1			○	Ⓢ		
	300-020			0.2		Ⓢ				

Dimension B shows available grooving depth

GBA43% ...RF : Sharp Edge Type

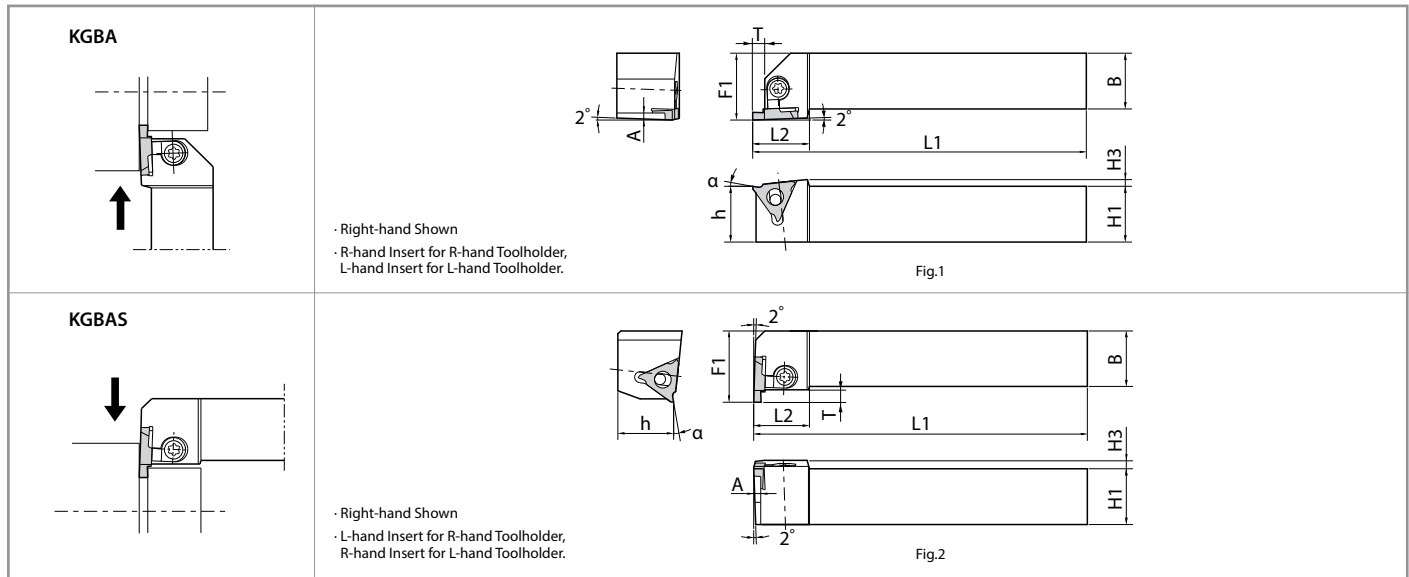
● : U.S. Stock Ⓢ : U.S. Stock (R-hand Only) Ⓛ : U.S. Stock (L-hand Only)
○ : World Express (Shipping: 7-10 Business Days) Ⓢ : World Express (R-hand Only) Ⓛ : World Express (L-hand Only)

Inserts sold in 10 piece boxes

Rake Angle (α) After Installment of GBA (External Grooving Toolholders)

GBA32% ○○○-○○○		GBA43% ○○○-○○○		GBA43% ○○○-○○○R (Full-R)	
α	Insert Grade	α	Insert Grade	Insert Grade	Full-R Part Number
10°	TN620, TN90, PV7040, PR930 PR1115, PR1215, PR1625, PR905 KPD001, KPD010	0°	KBN510, KBN525	10°	TN620, TN90, PV7040, PR930 PR1115, PR1215, PR1625, PR905
		10°	TN620, TC40N, TN90, PV7040 PR930, PR1115, PR1215, PR1625, PR905 KPD001, KPD010		14°
20°	KW10	20°	KW10		KW10

KGBA / KGBAS Toolholders



Toolholder Dimensions

Part Number	Stock		Unit	Dimensions								Drawing	Spare Parts		Applicable Inserts
	R	L		H1=h	H3	B	L1	L2	F1	A	T		Clamp Set	Wrench	
KGBA% 12-3	●	●	inch	0.750	0.160	0.750	5.000	0.945	1.000	-	0.098	Fig.1	LGBA-16% S	FT-15	GBA32%
16-3	●	●		1.000	0.160	1.000	6.000	0.945	1.250	-	0.098				
12-4-15	●	●		0.750	0.160	0.750	5.000	1.004	1.000	0.039	0.157				
16-4-15	●	●		1.000	0.160	1.000	6.000	1.004	1.250	0.039	0.157				
12-4-25	●	●		0.750	0.160	0.750	5.000	1.004	1.000	0.079	0.177				
16-4-25	●	●		1.000	0.160	1.000	6.000	1.004	1.250	0.079	0.177				
KGBA% 2020K-16	●	●	mm	20	4.0	20	125	24	25	-	2.5	Fig.1	LGBA-16% S	FT-15	GBA32%
2525M-16	○	○		25		150	30								
2020K22-15	●	○		20	4.0	20	125	25.5	25	1.0	4.0				
2525M22-15	●	●		25		150	30								
2020K22-25	●	○		20	4.0	20	125	25.5	25	2.0	4.5				
2525M22-25	●	○		25		150	30								
2020K22-25T5	●	○		20	4.0	20	125	25.5	25	2.0	5.5				
2525M22-25T5	○	○		25		150	30								
2020K22-35	○	○		20	4.0	20	125	25.5	25	3.0	5.5				
2525M22-35	○	○		25		150	30								
2020H22-15*	○	○		20	4.0	20	100	25.5	25	1.0	4.0				
2020H22-25*	○	○							2.0	4.5					
2020H22-35*	○	○	3.0						5.5						
KGBASR 12-3	●		inch	0.750	0.152	0.750	5.000	0.984	0.984	-	0.098	Fig.2	LGBA-16LS	FT-15	GBA32L
16-3	●			1.000	0.172	1.000	6.000	0.984	1.181	-	0.098				
12-4-15	●			0.750	0.160	0.750	5.000	0.984	1.062	0.039	0.157				
16-4-15	●			1.000	0.180	1.000	6.000	0.984	1.260	0.039	0.157				
12-4-25	●			0.750	0.160	0.750	5.000	0.984	1.062	0.079	0.177				
16-4-25	●			1.000	0.197	1.000	6.000	0.984	1.250	0.079	0.177				
KGBAS% 2020K-16	○	○	mm	20	4.0	20	125	25	25	-	2.5	Fig.2	LGBA-16% S	FT-15	GBA32%
2525M-16	○	○		25		150	30								
2020K22-15	○	●		20	4.5	20	125	25	27	1.0	4.0				
2525M22-15	●	○		25		150	32								
2020K22-25	○	○		20	4.5	20	125	25	27	2.0	4.5				
2525M22-25	○	○		25		150	32								
2020K22-25T5	○	○		20	4.5	20	125	25	27	2.0	5.5				
2525M22-25T5	○	○		25		150	32								
2020K22-35	○	○		20	4.5	20	125	25	27	3.0	5.5				
2525M22-35	○	○		25		150	32								

Dimension T shows the distance from the toolholder to the cutting edge. Reference dimension B in applicable insert table for available grooving depth.

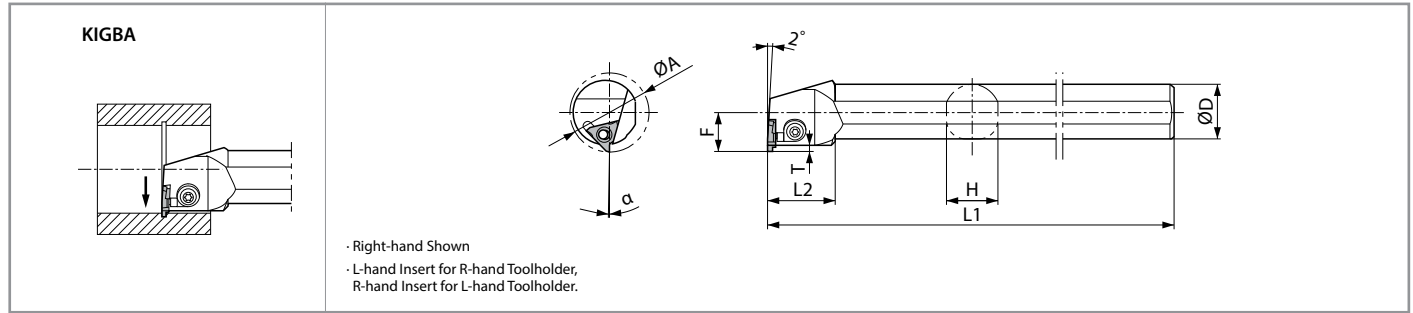
● : U.S. Stock ○ : World Express (Shipping: 7-10 Business Days)

* Short Shank Type Clamp Set : KGBA% ... LGBA-○○RS for Right-hand Toolholder, and LGBA-○○LS for Left-hand Toolholder.
KGBAS% ... LGBA-○○LS for Right-hand Toolholder, and LGBA-○○RS for Left-hand Toolholder.

External Grooving Toolholders KGBA Short Shank Types are Available

For NC lathe, KGBAR2020K-○○ (Overall length 125mm) short shank type KGBAR2020H22-○○ (Overall length 100mm) is available. No longer requires the user to cut the shank portion.

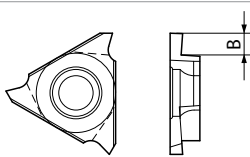
KIGBA Toolholders



Toolholder Dimensions

Part Number	Stock		Unit	Min. Bore Dia.	Dimensions						Spare Parts		Applicable Inserts
	R	L			ϕA	ϕD	H	L1	L2	F	*T	Clamp Set	
KIGBA% 16-3	●	●	inch	1.38	1.00	0.92	9.0	1.18	0.69	0.12	LGBA-16% S	FT-15	GBA32%
	●	●		1.57	1.25	1.18	10.0	1.18	0.90	0.12			LGBA-22% S
KIGBA% 3525-16	○	●	mm	35	25	23	220	30	17.5	2.8	LGBA-16% S	FT-15	GBA32%
	●	●		40	32	30	250	30	23.0	3.0			LGBA-22% S

* Dimension T shows the distance from the toolholder to the cutting edge.
Available grooving depth depends on the insert.
KIGBA% 3525-16 : Dimension B of the applicable insert (GBA32 Type)
4032-22 : Dimension B of the applicable insert (GBA43 Type)
① 2.0 mm (Dimension B > 2.8mm)
② 2.8 mm (Dimension B ≥ 2.8mm)



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

Clamp Set : LGBA-○●LS for Right-hand Toolholder, and LGBA-○●RS for Left-hand Toolholder.

Rake Angle (α) After Installment of GBA

(External Grooving Toolholders)

GBA32% ○○○-○○○		GBA43% ○○○-○○○		GBA43% ○○○-○○○R (Full-R)		
α	Insert Grade	α	Insert Grade	Insert Grade	Full-R Part Number	
+1°	TN620, TN90, PV7040, PR930 PR1115, PR1215, PR1625, PR905 KPD001, KPD010	-9°	KBN510, KBN525	+1°	TN620, TN90, PV7040, PR930 PR1115, PR1215, PR905	050R ~ 150R
		+1°	TN620, TC40N, TN90, PV7040 PR930, PR1115, PR1215, PR1625, PR905 KPD001, KPD010		TN620, TN90, PV7040, PR930 PR1115, PR1215, PR1625, PR905	200R
+11°	KW10	+11°	KW10	KW10	050R ~ 200R	

Rake Angle (α) After Installment of GBA-GM

(External Grooving Toolholders)

α	Insert Part Number	α	Insert Part Number
+1°	GBA43% 150-020GM	+3°	GBA43% 300-030GM GBA43% 400-040GM
+6°	GBA43% 175-020GM		
	GBA43% 265-030GM		

α shows the rake angle at the center of the edge width after installing insert

Rake Angle (α) After Installment of GBA-MY

(External Grooving Toolholders)

α	Insert Part Number
+6°	GBA43% 175-020MY
	GBA43% 350-030MY
+5°	GBA43% 400-040MY

α shows the rake angle at the center of the edge width after installing insert

Recommended Cutting Conditions ★ 1st Recommendation ☆ 2nd Recommendation

GBA Inserts (Ground Chipbreaker)

Workpiece	Recommended Insert Grades (Cutting Speed Vc : sfm)										(1) f (feed) for Grooving (ipr) (2) f (feed) for Turning (ipr) (3) D.O.C. for Turning (in)					Notes	
	MEGA COAT Cermet		Cermet		MEGA COAT	MEGA COAT NANO	PVD Coated Carbide		Carbide	CBN	PCD	GBA○○○% O31N ~ O41N 033... ~ 100...	GBA○○○% O47N ~ O78N 125... ~ 200...	GBA○○○% O94N ~ 109N 230... ~ 300...	GBA○○○% 125N ~ 156N 330... ~ 400...		GBA○○○% 172N ~ 188N 400... ~ 480...
	PV7040	TN620	TC40	TN90	PR1215	PR1625	PR930	PR1115	PR905	KW10	KBN510 KBN525						
Carbon Steel	☆ 490 - 790	★ 260 - 720	☆ 490 - 720	☆ 490 - 720	★ 260 - 660	★ 260 - 590	☆ 260 - 590	☆ 260 - 590	-	-	-	-	(1) 0.0012 - 0.0031 (2) Not Recommended (3) Not Recommended	(1) 0.0016 - 0.0035 (2) 0.0016 - 0.0035 (3) Max. 0.0118	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0047 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0047 (2) 0.0020 - 0.0039 (3) Max. 0.0315
Alloy Steel	☆ 430 - 720	★ 260 - 660	☆ 430 - 660	☆ 430 - 660	★ 260 - 520	★ 260 - 520	☆ 260 - 520	☆ 260 - 520	-	-	-	-	(1) 0.0012 - 0.0028 (2) Not Recommended (3) Not Recommended	(1) 0.0016 - 0.0031 (2) 0.0016 - 0.0031 (3) Max. 0.0118	(1) 0.0020 - 0.0035 (2) 0.0020 - 0.0035 (3) Max. 0.0197	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0315
Stainless Steel	-	-	-	☆ 230 - 490	☆ 200 - 490	★ 200 - 430	☆ 200 - 430	☆ 200 - 430	-	-	-	-	(1) 0.0012 - 0.0028 (2) Not Recommended (3) Not Recommended	(1) 0.0016 - 0.0031 (2) 0.0016 - 0.0031 (3) Max. 0.0118	(1) 0.0020 - 0.0035 (2) 0.0020 - 0.0035 (3) Max. 0.0197	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0315
Cast Iron	-	-	-	-	-	-	-	-	★ 260 - 590	☆ 200 - 390	★ 490 - 1,310	-	(1) 0.0012 - 0.0031 (2) Not Recommended (3) Not Recommended	(1) 0.0016 - 0.0035 (2) 0.0016 - 0.0035 (3) Max. 0.0118	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0047 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0047 (2) 0.0020 - 0.0039 (3) Max. 0.0315
Aluminum	-	-	-	-	-	-	-	-	-	★ 490 - 1,310	-	★ 490 - 6,560	(1) 0.0020 - 0.0047 (2) Not Recommended (3) Not Recommended	(1) 0.0020 - 0.0059 (2) 0.0020 - 0.0059 (3) Max. 0.0197	(1) 0.0020 - 0.0059 (2) 0.0020 - 0.0059 (3) Max. 0.0315	(1) 0.0031 - 0.0059 (2) 0.0031 - 0.0059 (3) Max. 0.0315	(1) 0.0031 - 0.0059 (2) 0.0031 - 0.0059 (3) Max. 0.0315
Brass	-	-	-	-	-	-	-	-	-	★ 490 - 980	-	★ 660 - 2,620	(1) 0.0020 - 0.0047 (2) Not Recommended (3) Not Recommended	(1) 0.0020 - 0.0059 (2) 0.0020 - 0.0059 (3) Max. 0.0197	(1) 0.0020 - 0.0059 (2) 0.0020 - 0.0059 (3) Max. 0.0315	(1) 0.0031 - 0.15 (2) 0.0031 - 0.15 (3) Max. 0.0315	(1) 0.0031 - 0.0059 (2) 0.0031 - 0.0059 (3) Max. 0.0315
Hard materials	-	-	-	-	-	-	-	-	-	-	★ 260 - 390	-	(1) 0.0008 - 0.0020 (2) Not Recommended (3) Not Recommended	(1) 0.0008 - 0.0020 (2) 0.0004 - 0.0016 (3) Max. 0.0039	-	-	-

Above cutting conditions are for external grooving. Set both cutting speed and feed rate 10% lower for internal grooving.

GBA Inserts (GM Chipbreaker)

Workpiece	Recommended Insert Grades (Cutting Speed Vc : sfm)				(1) f (feed) for Grooving (ipr) (2) f (feed) for Turning (ipr) (3) D.O.C. for Turning (in)					Notes
	Cermet		MEGACOAT	MEGACOAT NANO	GBA43% 140-010GM	GBA43% 150-020GM	GBA43% 175-020GM ~ 230-020GM	GBA43% 250-030GM ~ 350-030GM	GBA43% 400-040GM	
	TN620	PR1215	PR1625							
Carbon Steel	★ 260 - 720	☆ 260 - 720	☆ 260 - 660	(1) 0.0012 - 0.0039 (2) 0.0012 - 0.0031 (3) Max. 0.0079	(1) 0.0012 - 0.0047 (2) 0.0012 - 0.0031 (3) Max. 0.0118	(1) 0.0012 - 0.0047 (2) 0.0012 - 0.0035 (3) Max. 0.0118	(1) 0.0016 - 0.0059 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0059 (2) 0.0020 - 0.0039 (3) Max. 0.0315		
Alloy Steel	★ 260 - 660	☆ 260 - 660	☆ 260 - 590	(1) 0.0012 - 0.0039 (2) 0.0012 - 0.0031 (3) Max. 0.0079	(1) 0.0012 - 0.0047 (2) 0.0012 - 0.0031 (3) Max. 0.0118	(1) 0.0012 - 0.0047 (2) 0.0012 - 0.0035 (3) Max. 0.0118	(1) 0.0016 - 0.0059 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0059 (2) 0.0020 - 0.0039 (3) Max. 0.0315		
Stainless Steel	-	★ 200 - 490	★ 200 - 430	(1) 0.0012 - 0.0039 (2) 0.0012 - 0.0031 (3) Max. 0.0079	(1) 0.0012 - 0.0039 (2) 0.0012 - 0.0031 (3) Max. 0.0118	(1) 0.0012 - 0.0039 (2) 0.0012 - 0.0035 (3) Max. 0.0118	(1) 0.0016 - 0.0047 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0016 - 0.0047 (2) 0.0020 - 0.0039 (3) Max. 0.0315		

Above cutting conditions are for external grooving. Set both cutting speed and feed rate 20% lower for internal grooving.

GBA Inserts (MY Chipbreaker)

Workpiece	Recommended Insert Grades (Cutting Speed Vc : sfm)								(1) f (feed) for Grooving (ipr) (2) f (feed) for Turning (ipr) (3) D.O.C. for Turning (in)					Notes
	Cermet		MEGA COAT	PVD Coated Carbide		Carbide	CBN	PCD	GBA43% 175-020MY ~ 200-020MY	GBA43% 230-020MY ~ 265-030MY	GBA43% 300-030MY	GBA43% 330-030MY ~ 350-030MY	GBA43% 400-040MY	
	TN6020	TC40	PR1215	PR930	PR1115	KW10	KBN510	KPD001 (KPD010)						
Carbon Steel	☆ 490 - 720	-	★ 260 - 660	☆ 260 - 660	☆ 260 - 660	-	-	-	(1) 0.0012 - 0.0031 (2) 0.0012 - 0.0031 (3) Max. 0.0118	(1) 0.04 - 0.0035 (2) 0.04 - 0.0035 (3) Max. 0.0118	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0047 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0047 (2) 0.0020 - 0.0039 (3) Max. 0.0315	
Alloy Steel	☆ 430 - 660	-	★ 260 - 590	☆ 260 - 590	☆ 260 - 590	-	-	-	(1) 0.0012 - 0.0028 (2) 0.0012 - 0.0039 (3) Max. 0.0118	(1) 0.04 - 0.0031 (2) 0.04 - 0.0031 (3) Max. 0.0118	(1) 0.0020 - 0.0035 (2) 0.0020 - 0.0035 (3) Max. 0.0197	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0315	
Stainless Steel	☆ 230 - 490	-	☆ 200 - 490	☆ 200 - 490	★ 200 - 490	-	-	-	(1) 0.0012 - 0.0028 (2) 0.0012 - 0.0039 (3) Max. 0.0118	(1) 0.04 - 0.0031 (2) 0.04 - 0.0031 (3) Max. 0.0118	(1) 0.0020 - 0.0035 (2) 0.0020 - 0.0035 (3) Max. 0.0197	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0197	(1) 0.0020 - 0.0039 (2) 0.0020 - 0.0039 (3) Max. 0.0315	

Above cutting conditions are for external grooving. Set both cutting speed and feed rate 20% lower for internal grooving.



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