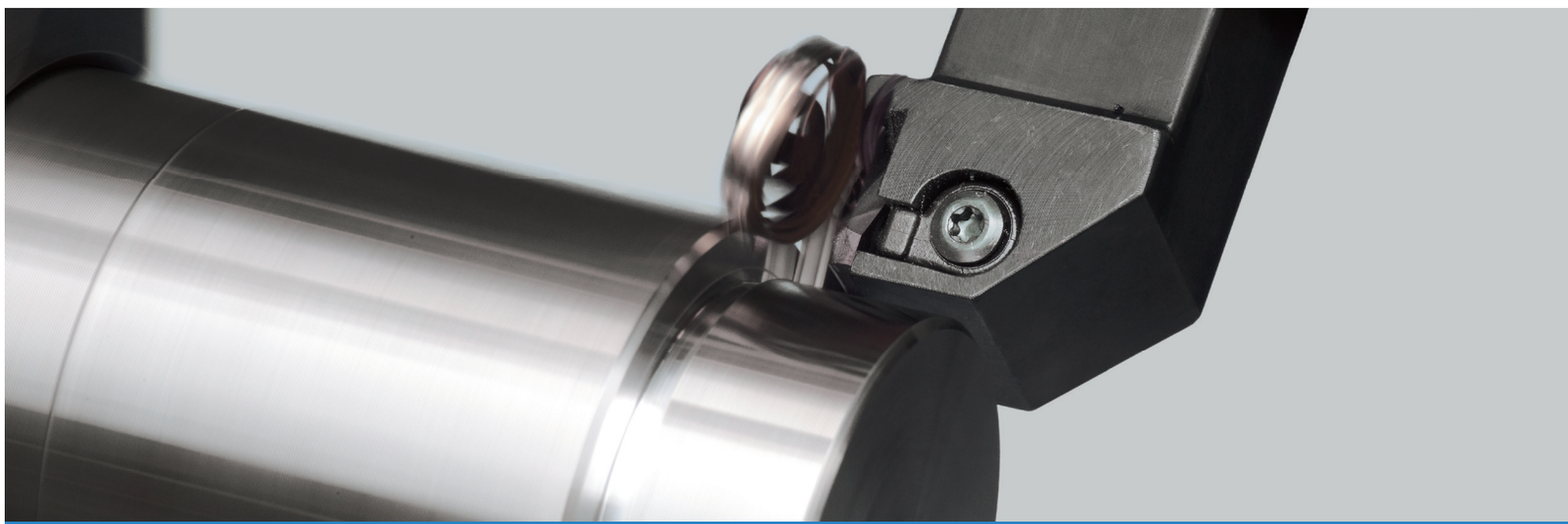
THE NEW VALUE FRONTIER

KYOCERA

GBA Grooving with 3 Cutting Edges

GBA

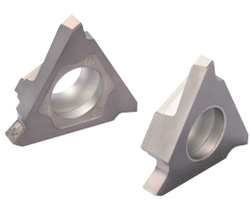


Smooth Chip Control with Molded Chipbreaker and Excellent Surface Finish

Large Lineup of Chipbreakers and Insert Grades

Smooth chip control with GM chipbreaker

NEW **Hybrid Cermet TN620**



GBA Grooving with 3 Cutting Edges

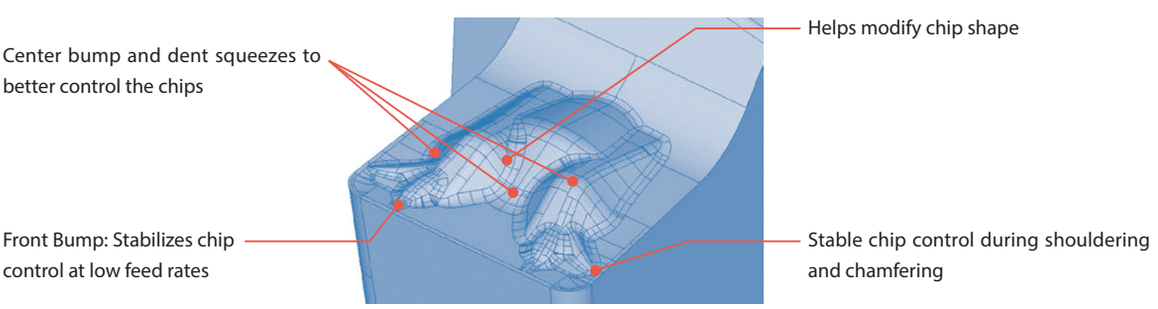
GBA

Smooth Chip Control with Molded Chipbreaker and Excellent Surface Finish

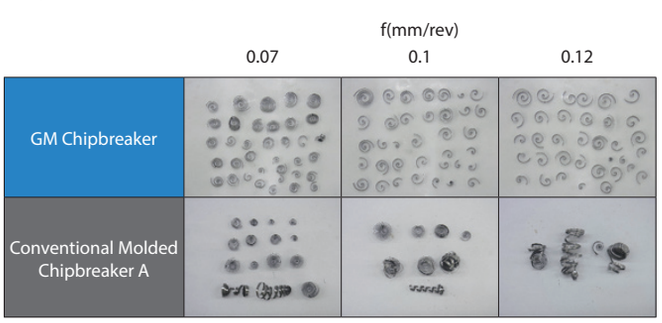
1 Smooth chip control with GM chipbreaker

Smooth chip control due to optimum bump placement on the chipbreaker
Groove Widths from 1.4 mm

Multi-Bump Design



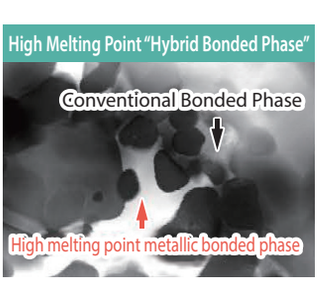
Chip Control Comparison (In-house Evaluation)



Cutting Conditions : Vc = 200 m/min, Edge width2.0 mm, Grooving Workpiece : SCr420(ø40)

2 Large Lineup to Introducing Hybrid Cermet TN620

Excellent Surface Finish with Sharp Edge Inserts (Ground Chipbreaker)



Combining the conventional cermet bonded phase (nickel, cobalt) and the special high melting point metallic bonded phase

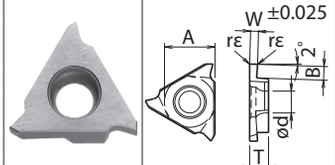
Provides high adhesion resistance to eliminate galling of the work piece

Standard Stock Item Description

Description	A	T	ød
GBA32_	9.525	3.18	4.4
GBA43_	12.70	4.76	5.5
GBA43 R/L480	12.70	5.00	5.5

		MEGACOAT Cermet	Cermet		MEGA COAT	PVD Coated Carbide				Carbide	
		PV7040	TC40N	TN90	PR1215	PR1115	PR905	PR930		KW10	
P	Carbon Steel / Alloy Steel	●			◕	◔		◔			
M	Stainless Steel				●	◕		◔			
K	Cast Iron						◕		◔		
N	Non-ferrous Material								◕		
S	Titanium Alloy								◕		
H	Hardened Material(～40HRC)				●	○		○			
	Hardened Material(40HRC～)										

Usage Classification
- ◕ : Continuous-Light Interruption / 1st Choice
- ◔ : Continuous-Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice



Insert (Right-hand Insert Shown)	Description	W	B	rε	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	Applicable Toolholders
	GBA32 R/L 033-005 *1	0.33	0.8	0.05									●	●	●	●					
	GBA32 R/L 050-005 *2	0.50	1.0	0.05					●	●									●	●	
	GBA32 R/L 050-005 *2	0.50	1.2	0.05							●	●	●	●	●	●	●	●			
	GBA32 R/L 075-005	0.75	2.0	0.05	●	●			●	●	●	●	●	●	●	●	●	●	●	●	
	GBA32 R/L 095-005	0.95	2.0	0.05					●	●	●	●	●	●	●	●	●	●	●	●	
	GBA32 R/L 100-005	1.00	2.0	0.05	●	●			●	●	●	●	●	●	●	●	●	●	●	●	
	GBA32 R/L 110-005	1.10	2.0	0.05									●	●	●	●					
	GBA32 R/L 120-005	1.20	2.0	0.05							●	●	●	●	●	●					
	GBA32 R/L 125-020	1.25	2.0	0.2	●	●			●	●	●	●	●	●	●	●	●	●	●	●	
	GBA32 R/L 130-020	1.30	2.0	0.2							●	●	●	●	●	●					
	GBA32 R/L 140-020	1.40	2.5	0.2							●	●	●	●	●	●					KGBA R/L…16
	GBA32 R/L 145-020	1.45	2.0	0.2					●	●									●	●	KGBAS L/R…16
	GBA32 R/L 145-020	1.45	2.5	0.2							●	●	●	●	●	●	●	●			KIGBA L/R…16(Internal)
	GBA32 R/L 150-020	1.50	2.0	0.2	●	●			●	●									●	●	
	GBA32 R/L 150-020	1.50	2.5	0.2							●	●	●	●	●	●	●	●			
	GBA32 R/L 160-020	1.60	2.5	0.2							●	●	●	●	●	●					
	GBA32 R/L 170-020	1.70	2.5	0.2							●	●	●	●	●	●					
	GBA32 R/L 175-020	1.75	2.0	0.2					●	●									●	●	
	GBA32 R/L 175-020	1.75	2.5	0.2							●	●	●	●	●	●	●	●			
	GBA32 R/L 200-020	2.00	2.5	0.2	●	●			●	●	●	●	●	●	●	●	●	●	●	●	
	GBA32 R/L 225-020	2.25	2.5	0.2							●	●	●	●	●	●					
	GBA32 R/L 250-020	2.50	2.5	0.2					●	●	●	●	●	●	●	●	●	●	●	●	
	GBA32 R/L 300-020	3.00	2.5	0.2							●	●	●	●	●	●					
	GBA43 R/L 125-010	1.25	2.0	0.1							●	●	●	●							
	GBA43 R/L 125-020	1.25	2.0	0.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	GBA43 R/L 140-020	1.40	3.5	0.2							●	●	●	●	●	●					
	GBA43 R/L 145-020	1.45	2.0	0.2			●	●	●	●									●	●	
	GBA43 R/L 145-020	1.45	3.5	0.2							●	●	●	●	●	●	●	●			
	GBA43 R/L 150-010	1.50	3.5	0.1							●	●	●	●							
	GBA43 R/L 150-020	1.50	3.5	0.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	KGBA R/L…22-15
	GBA43 R/L 170-020	1.70	3.5	0.2							●	●	●	●	●	●					KGBAS L/R…22-15
	GBA43 R/L 175-020	1.75	3.5	0.2			●	●	●	●	●	●	●	●	●	●	●	●	●	●	KIGBA L/R…22(Internal)
	GBA43 R/L 185-020	1.85	3.5	0.2			●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	GBA43 R/L 195-020	1.95	3.5	0.2									●	●	●	●					
	GBA43 R/L 200-010	2.00	3.5	0.1							●	●	●	●							
	GBA43 R/L 200-020	2.00	3.5	0.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	GBA43 R/L 225-020	2.25	3.5	0.2							●	●	●	●	●	●					
	GBA43 R/L 230-020	2.30	3.5	0.2			●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	GBA43 R/L 250-010	2.50	5.0	0.1							●	●	●	●							★1
	GBA43 R/L 250-030	2.50	4.0	0.3	●	●	●	●	●	●									●	●	★2
	GBA43 R/L 250-030	2.50	5.0	0.3							●	●	●	●	●	●	●	●			★1
	GBA43 R/L 265-030	2.65	4.0	0.3			●	●	●	●									●	●	★2
	GBA43 R/L 265-030	2.65	5.0	0.3							●	●	●	●	●	●	●	●			★1
	GBA43 R/L 280-030	2.80	4.0	0.3			●	●	●	●									●	●	★2
	GBA43 R/L 280-030	2.80	5.0	0.3							●	●	●	●	●	●	●	●			★1
	GBA43 R/L 300-010	3.00	5.0	0.1							●	●	●	●							
	GBA43 R/L 300-030	3.00	4.0	0.3	●	●	●	●	●	●									●	●	★2
	GBA43 R/L 300-030	3.00	5.0	0.3							●	●	●	●	●	●	●	●			★1
	GBA43 R/L 325-030	3.25	5.0	0.3									●		●						★2
	GBA43 R/L 330-030	3.30	4.0	0.3			●	●	●	●									●	●	
	GBA43 R/L 330-030	3.30	5.0	0.3							●	●	●	●	●	●	●	●			★1
	GBA43 R/L 350-010	3.50	5.0	0.1							●	●	●	●							
	GBA43 R/L 350-030	3.50	5.0	0.3			●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	GBA43 R/L 400-010	4.00	5.0	0.1							●	●	●	●							KGBA R/L…22 35
	GBA43 R/L 400-040	4.00	5.0	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	KGBAS L/R…22-35
	GBA43 R/L 430-040	4.30	5.0	0.4			●	●	●		●	●	●	●	●	●	●	●	●	●	KIGBA L/R…22(Internal)
	GBA43 R/L 450-040	4.50	5.0	0.4			●	●	●		●	●	●	●	●	●	●	●	●	●	
	GBA43 R/L 480-040	4.80	5.0	0.4			●	●	●		●	●	●	●	●	●	●	●	●	●	

Dimension B shows available grooving depth.

● : Standard Stock

*1. The edge width tolerance of GBA32 R/L 033-005 : $0.33^{+0.02}_{-0.03}$

*2. The edge width tolerance of GBA32 R/L 050-005 : $0.50^{+0.05}_{0}$

★Applicable Toolholders

1: KGBA R/L…22-25T5, KGBAS L/R…22-25T5, KIGBA L/R…22

2: KGBA R/L…22-25T5, KGBAS L/R…22-25T5, KGBA R/L…22-25, KGBAS L/R…22-25, KIGBA L/R…22

Standard Stock Item Description

(mm)

Description	A	T	ød
GBA32_	9.525	3.18	4.4
GBA43_	12.70	4.76	5.5
GBA43 R/L480	12.70	5.00	5.5

		NEW				
P	Carbon Steel / Alloy Steel	●	○	◕	◔	◔
M	Stainless Steel			●	◕	◔
K	Cast Iron					
N	Non-ferrous Material					
S	Titanium Alloy					
H	Hardened Material(～40HRC)			●	○	○
	Hardened Material(40HRC～)					

Usage Classification
- ◕ : Continuous-Light Interruption / 1st Choice
- ◔ : Continuous-Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

Insert (Right-hand Insert Shown)	Description		Dimension (mm)			Cermet				MEGA COAT		PVD Coated Carbide				Applicable Toolholders
			W	B	rε	TN620		TN6020		PR1215		PR1115		PR930		
						R	L	R	L	R	L	R	L	R	L	
NEW Sharp Edge	GBA32 R/L	050-005F *1	0.50	1.0	0.05	●	●									KGBA R/L...16 KGBAS L/R...16 KIGBA L/R...16(Internal)
		075-005F	0.75	2.0		●	●									
		095-005F	0.95			●	●									
		100-005F	1.00			●	●									
		125-020F	1.25		0.2	●	●									
		145-020F	1.45			●	●									
		150-020F	1.50			●	●									
		175-020F	1.75			●	●									
		200-020F	2.00	2.5		●	●									
		250-020F	2.50			●	●									
	GBA43 R/L	125-020F	1.25	2.0	0.2	●	●									KGBA R/L...22-15 KGBAS L/R...22-15 KIGBA L/R...22(Internal)
		145-020F	1.45			●	●									
		150-020F	1.50	3.5		●	●									
		175-020F	1.75			●	●									
		185-020F	1.85			●	●									
		200-020F	2.00			●	●									
		230-020F	2.30			●	●									
		250-030F	2.50	4.0	0.3	●	●									KGBA R/L...22-25T5 KGBAS L/R...22-25T5 KIGBA L/R...22(Internal)
		265-030F	2.65			●	●									
		280-030F	2.80			●	●									
		300-030F	3.00			●	●									
		330-030F	3.30			●	●									
		350-030F	3.50	5.0		●	●									KGBA R/L...22-35 KGBAS L/R...22-35 KIGBA L/R...22(Internal)
		400-040F	4.00		0.4	●	●									
		430-040F	4.30			●										
		450-040F	4.50			●										
		480-040F	4.80			●										
Molded Chipbreaker GM Chipbreaker	GBA43 R/L	140-010GM	1.40	3.5	0.1	●	●			●	●					KGBA R/L...22-15 KGBAS L/R...22-15 KIGBA L/R...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 R/L...22-25T5 KGBAS L/R...22-25T5 KIGBA L/R...22(Internal)
		265-030GM	2.65			●	●			●	●					
		300-030GM	3.00			●	●			●	●					
		330-030GM	3.30			●	●			●	●					
		350-030GM	3.50			●	●			●	●					KGBA R/L...22-35 KGBAS L/R...22-35 KIGBA L/R...22(Internal)
		400-040GM	4.00		0.4	●	●			●	●					
Molded Chipbreaker MY chipbreaker	GBA43 R/L	175-020MY	1.75	3.5	0.2			●	●	●	●	●	●	●	●	KGBA R/L...22-15 KGBAS L/R...22-15 KIGBA L/R...22(Internal)
		185-020MY	1.85					●	●	●	●	●	●	●	●	
		200-020MY	2.00					●	●	●	●	●	●	●	●	
		230-020MY	2.30					●	●	●	●	●	●	●	●	
		250-030MY	2.50	4.0	0.3			●	●							★2 *2
				5.0						●	●	●	●	●	●	★1 *2
		265-030MY	2.65	4.0				●	●							★2 *2
				5.0						●	●	●	●	●	●	★1 *2
		300-030MY	3.00	4.0				●	●							★2 *2
				5.0						●	●	●	●	●	●	★1 *2
		330-030MY	3.30	4.0				●								★2 *2
				5.0						●	●	●	●	●		★1 *2
		350-030MY	3.50	5.0				●	●	●	●	●	●	●	●	KGBA R/L...22-35 KGBAS L/R...22-35 KIGBA L/R...22(Internal)
		400-040MY	4.00		0.4			●	●	●	●	●	●	●	●	

Dimension B shows available grooving depth.

● : Standard Stock

*1. The edge width tolerance of GBA32 R/L 050-005F : $0.50^{-0.05}_{-0.20}$

*2. Refer to Page 2 for ★1★2

Rake Angle (α) after Installment of GBA-GM type (External Grooving Toolholders)

α	Insert Description	α	Insert Description
10°	GBA43 R/L150-020GM	12°	GBA43 R/L300-030GM ～ GBA43 R/L400-040GM
15°	GBA43 R/L175-020GM ～ GBA43 R/L265-030GM		

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

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

α	Insert Description
15°	GBA43 R/L175-020MY ～ GBA43 R/L350-030MY
14°	GBA43 R/L400-040MY

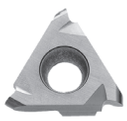
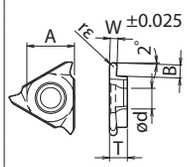
α shows the rake angle at the center of the edge width after installing insert

Standard Stock Item Description

(mm)

Description	A	T	ød
GBA32_	9.525	3.18	4.4
GBA43_	12.70	4.76	5.5
GBA43 R/L480	12.70	5.00	5.5

		NEW								
P	Carbon Steel / Alloy Steel	●	○		◕	◔		◔		Usage Classification
M	Stainless Steel				●	◕		◔		◕ : Continuous-Light Interruption / 1st Choice
K	Cast Iron						◕		◔	◔ : Continuous-Light Interruption / 2nd Choice
N	Non-ferrous Material								◕	● : Continuous / 1st Choice
S	Titanium Alloy								◕	○ : Continuous / 2nd Choice
H	Hardened Material(~40HRC)				●	○		○		
	Hardened Material(40HRC~)									

Insert (Right-hand Insert Shown)	Description		Dimension (mm) W	B	rε	MEGACOAT Cermet PV7040 R	L	Cermet TN620 R	L	TN90 R	L	MEGA COAT PR1215 R	L	PVD Coated Carbide PR1115 R	L	PR905 R	L	PR930 R	L	Carbide KW10 R	L	Applicable Toolholders
 Full-R		GBA32R	200-100R	2.00	2.5	1.00							●		●								KGBA R/L…16 KGBAS R/L…16 KIGBA R/L…16(Internal)
			300-150R	3.00		1.50							●		●								
		GBA43 R/L	100-050R	1.00	2.0	0.50	●	●			●	●	●	●	●	●	●	●	●	●	●	●	KGBA R/L…22-15 KGBAS L/R…22-15 KIGBA L/R…22(Internal)
			150-075R	1.50	3.5	0.75	●	●			●	●	●	●	●	●	●	●	●	●	●	●	
			200-100R	2.00		1.00	●	●			●	●	●	●	●	●	●	●	●	●	●	●	
			250-125R	2.50	4.0	1.25					●	●	●	●	●	●	●	●	●	●	●	●	★2
			300-150R	3.00		1.50					●	●	●	●	●	●	●	●	●	●	●	●	
			400-200R	4.00	5.0	2.00					●		●	●	●	●	●	●	●	●	●	●	KGBA R/L…22-35 KGBAS L/R…22-35 KIGBA L/R…22(Internal)
Full-R (Round)		GBA43 R/L	100-050RF	1.00	2.0	0.50			●	●													KGBA R/L…22-15 KGBAS L/R…22-15 KIGBA L/R…22(Internal)
			150-075RF	1.50	3.5	0.75			●	●													
			200-100RF	2.00		1.00			●	●													
			250-125RF	2.50	4.0	1.25			●	●													★2
			300-150RF	3.00		1.50			●	●													
			400-200RF	4.00	5.0	2.00			●														KGBA R/L…22-35 KGBAS L/R…22-35 KIGBA L/R…22(Internal)

Dimension B shows available grooving depth.

●: Standard Stock

GBA43 R/L …RF: Sharp Edge Type

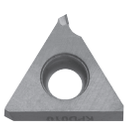
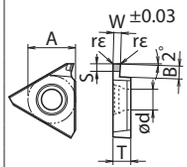
★Applicable Toolholders

2: KGBA R/L…22-25T5, KGBAS L/R …22-25T5, KGBA R/L…22-25, KGBAS L/R …22-25, KIGBA L/R…22

(mm)

Description	A	T	ød
GBA32_	9.525	3.18	4.4
GBA43_	12.70	4.76	5.5
GBA43 R/L480	12.70	5.00	5.5

											Usage Classification
P	Carbon Steel / Alloy Steel										◕ : Continuous-Light Interruption / 1st Choice
M	Stainless Steel										◔ : Continuous-Light Interruption / 2nd Choice
K	Cast Iron										● : Continuous / 1st Choice
N	Non-ferrous Material					●					○ : Continuous / 2nd Choice
S	Titanium Alloy					●					
H	Hardened Material(~40HRC)										
	Hardened Material(40HRC~)		○		●						

Insert (Right-hand Insert Shown)	Description		Dimension (mm) W	B	rε	CBN KBN510 R	L	KBN525 R	L	PCD KPD001 R	L	KPD010 R	L	Applicable Toolholders
 1-edge	 GBA32 S = 1.7 GBA43 S = 1.9	GBA32R	125-010	1.25	2.0	0.1							●		KGBA R/L…16 KGBAS R/L…16 KIGBA R/L…16(Internal)
			150-010	1.50							●		●		
		GBA43 R/L	125-010	1.25	2.0	0.1							●	●	KGBA R/L…22-15 KGBAS L/R…22-15 KIGBA L/R…22(Internal)
			125-020			0.2	●	●	●	●					
			150-010	1.50	3.5	0.1					●	●	●	●	
			150-020			0.2	●	●	●	●					
			200-010	2.00		0.1					●	●	●	●	
			200-020			0.2	●	●	●	●					
			250-010	2.50	4.0	0.1					●	●	●	●	★2
			250-020			0.2	●	●	●	●					
			300-010	3.00		0.1					●	●	●	●	
			300-020			0.2	●	●	●	●					

Dimension B shows available grooving depth.

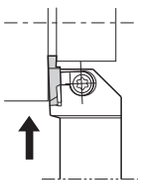
●: Standard Stock

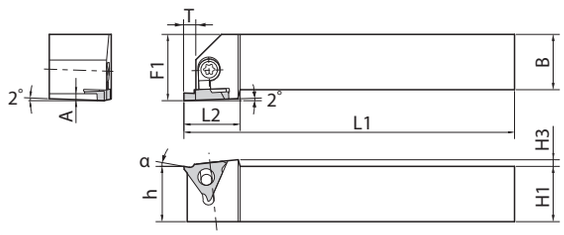
Rake Angle after Installment of GBA (α)
(External Grooving Toolholders)

For GBA32R/L○○○-○○○		For GBA43R/L○○○-○○○		For GBA43R/L○○○-○○○R(Full R)		
α	Insert Grade	α	Insert Grade	α	Insert Grade	Full-R Description
10°	TN620,TN90,PV7040,PR930 PR1115,PR1215,PR905 KPD001,KPD010	0°	KBN510, KBN525	10°	TN620,TN90,PV7040,PR930 PR1115,PR1215,PR905	050R ~ 150R
		10°	TN620,TC40N,TN90,PV7040 PR930,PR1115,PR1215,PR905 KPD001, KPD010	14°	TN620,TN90,PV7040,PR930 PR1115,PR1215,PR905	200R
20°	KW10				KW10	050R ~ 200R
		20°	KW10			

KGBA/KGBAS

〈KGBA〉

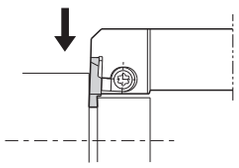


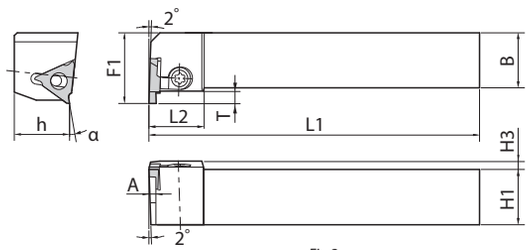


· Right-hand Shown
· R-hand Insert for R-hand Toolholder,
L-hand Insert for L-hand Toolholder.

Fig.1

〈KGBAS〉

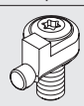




· Right-hand Shown
· L-hand Insert for R-hand Toolholder,
R-hand Insert for L-hand Toolholder.

Fig.2

Toolholder Dimensions

Description		Std.		Dimension (mm)										Spare Parts		Applicable Inserts
														Clamp Set	Wrench	
		R	L	H1=h	H3	B	L1	L2	F1	A	T	Insert				
KGBA R/L	2020K-16	●	●	20	4.0	20	125	24	25	—	2.5			LGBA-16 R/LS		GBA32 R/L type
	2525M-16	●	●	25		25	150		30							
	2020K22-15	●	●	20	4.0	20	125	25.5	25	1.0	4.0			LGBA-22 R/LS	FT-15	GBA43 R/L type
	2525M22-15	●	●	25		25	150		30							
	2020K22-25	●	●	20	4.0	20	125	25.5	25	2.0	4.5					
	2525M22-25	●	●	25		25	150		30							
	2020K22-25T5	●	●	20	4.0	20	125	25.5	25	2.0	5.5	Fig.1				
	2525M22-25T5	●	●	25		25	150		30							
	2020K22-35	●	●	20	4.0	20	125	25.5	25	3.0						
	2525M22-35	●	●	25		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					
KGBAS R/L	2020K-16	●	●	20	4.0	20	125	25	25	—	2.5			LGBA-16 L/RS		GBA32 L/R type
	2525M-16	●	●	25	4.5	25	150		30							
	2020K22-15	●	●	20	4.5	20	125	25	27	1.0	4.0			LGBA-22 L/RS	FT-15	GBA43 L/R type
	2525M22-15	●	●	25	5.0	25	150		32							
	2020K22-25	●	●	20	4.5	20	125	25	27	2.0	4.5	Fig.2				
	2525M22-25	●	●	25	5.0	25	150		32							
	2020K22-25T5	●	●	20	4.5	20	125	25	27	2.0	5.5					
	2525M22-25T5	●	●	25	5.0	25	150		32							
	2020K22-35	●	●	20	4.5	20	125	25	27	3.0						
	2525M22-35	●	●	25	5.0	25	150		32							

Dimension T shows the distance from the toolholder to the cutting edge.Available Groove Depth: "B" Dimension of Insert.

✻Short Shank Type
●: Standard Stock

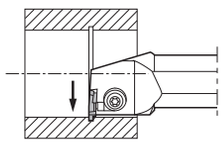
Clamp Set : KGBA R/L …LGBA- ◯◯ RS for Right-hand Toolholder, and LGBA- ◯◯ LS for Left-hand Toolholder.
KGBAS R/L …LGBA- ◯◯ LS for Right-hand Toolholder, and LGBA- ◯◯ RS for Left-hand Toolholder.

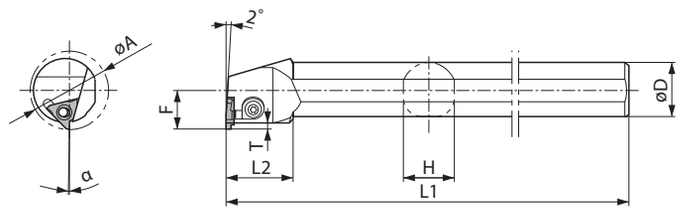
External Grooving Toolholders KGBA Short Shank types are available

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

KIGBA

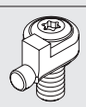
〈KIGBA〉





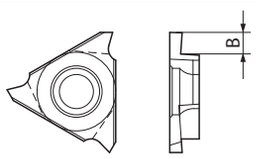
· Right-hand Shown
· L-hand Insert for R-hand Toolholder,
R-hand Insert for L-hand Toolholder.

Toolholder Dimension

Description		Stock		Min. Cutting Dia.	Dimension (mm)								Spare Parts		Applicable Insert
													Clamp Set	Wrench	
		R	L	øA	øD	H	L1	L2	F	*T					
KIGBA R/L	3525-16	●	●	35	25	23	220	30	17.5	2.8			LGBA-16 L/RS	FT-15	GBA32 L/R Type
	4032-22	●	●	40	32	30	250	30	23.0	3.0			LGBA-22 L/RS	FT-15	GBA43 L/R Type

● : Standard Stock

✻ Dimension T Shows the distance from the Toolholder to the cutting edge.
Available Grooving Depth depends on the insert.
KIGBAR/L3525-16 : Dimension B of the applicable insert (GBA32 type)
4032-22 : Dimension B of the applicable insert (GBA43 type)
①2.0 mm(Dimension B < 2.8mm)
②2.8 mm(Dimension B ≧ 2.8mm)



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

Rake Angle after Installment of GBA (α)

For GBA32R/L ○○○-○○○		For GBA43R/L ○○○-○○○		For GBA43R/L ○○○-○○○R(Full R)		
α	Insert Grade	α	Insert Grade	α	Insert Grade	Full-R Description
+1°	TN620,TN90,PV7040,PR930 PR1115,PR1215,PR905 KPD001, KPD010	-9°	KBN510, KBN525	+1°	TN620,TN90,PV7040,PR930 PR1115,PR1215,PR905	050R ~ 150R
		+1°	TN620,TC40N,TN90,PV7040 PR930,PR1115,PR1215,PR905 KPD001, KPD010	+5°	TN620,TN90,PV7040,PR930 PR1115,PR1215,PR905	200R
+11°	KW10	+11°	KW10		KW10	050R ~ 200R

Rake Angle (α) after Installment of GBA-GM type

α	Insert Description
+1°	GBA43 R/L150-020GM
+6°	GBA43 R/L175-020GM ≀ GBA43 R/L265-030GM
+3°	GBA43 R/L300-030GM ≀ GBA43 R/L400-040GM

α indicates the rake angle at the center of the edge width,
after installing insert.

Rake Angle sfter Installment of GBA-MY (α)

α	Insert Description
+6°	GBA43 R/L175-020MY ≀ GBA43 R/L350-030MY
+5°	GBA43 R/L400-040MY

α indicates 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: m/min)											(1) f for Grooving (mm/rev) (2) f for Turning (mm/rev) (3) ap for Turning (mm)					Remarks
	MC	Cermet			MEGA	PVD Coated Carbide			Carbide	CBN	PCD						
	PV7040	TN620	TC40N	TN90	PR1215	PR930	PR1115	PR905	KW10	KBN510 KBN525	KPD001 (KPD010)	GBA◯◯R/L 033 – 100-...	GBA◯◯R/L 125 – 200-...	GBA◯◯R/L 230 – 300-...	GBA◯◯R/L 330 – 400-...	GBA◯◯R/L 400 – 480-...	
Carbon Steel	☆ 150 – 240	★ 80 – 220	☆ 150 – 220	☆ 150 – 220	★ 80 – 200	☆ 80 – 180	☆ 80 – 180	—	—	—	—	(1)0.03 – 0.08 (2)Not Recommended (3)Not Recommended	(1)0.04 – 0.09 (2)0.04 – 0.09 (3)Max. 0.3	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.12 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.12 (2)0.05 – 0.1 (3)Max. 0.8	Wet
Alloy Steel	☆ 130 – 220	★ 80 – 200	☆ 130 – 200	☆ 130 – 200	★ 80 – 180	☆ 80 – 160	☆ 80 – 160	—	—	—	—	(1)0.03 – 0.07 (2)Not Recommended (3)Not Recommended	(1)0.04 – 0.08 (2)0.04 – 0.08 (3)Max. 0.3	(1)0.05 – 0.09 (2)0.05 – 0.09 (3)Max. 0.5	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.8	
Stainless Steel	—	—	—	☆ 70 – 150	☆ 60 – 150	☆ 60 – 130	★ 60 – 130	—	—	—	—	(1)0.03 – 0.07 (2)Not Recommended (3)Not Recommended	(1)0.04 – 0.08 (2)0.04 – 0.08 (3)Max. 0.3	(1)0.05 – 0.09 (2)0.05 – 0.09 (3)Max. 0.5	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.8	
Cast Iron	—	—	—	—	—	—	—	★ 80 – 180	☆ 60 – 120	★ 150 – 400	—	(1)0.03 – 0.08 (2)Not Recommended (3)Not Recommended	(1)0.04 – 0.09 (2)0.04 – 0.09 (3)Max. 0.3	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.12 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.12 (2)0.05 – 0.1 (3)Max. 0.8	
Aluminum	—	—	—	—	—	—	—	—	★ 150 – 400	—	★ 150 – 2,000	(1)0.05 – 0.12 (2)Not Recommended (3)Not Recommended	(1)0.05 – 0.15 (2)0.05 – 0.15 (3)Max. 0.5	(1)0.05 – 0.15 (2)0.05 – 0.15 (3)Max. 0.8	(1)0.08 – 0.15 (2)0.08 – 0.15 (3)Max. 0.8	(1)0.08 – 0.15 (2)0.08 – 0.15 (3)Max. 0.8	
Brass	—	—	—	—	—	—	—	—	★ 150 – 300	—	★ 200 – 800	(1)0.05 – 0.12 (2)Not Recommended (3)Not Recommended	(1)0.05 – 0.15 (2)0.05 – 0.15 (3)Max. 0.5	(1)0.05 – 0.15 (2)0.05 – 0.15 (3)Max. 0.8	(1)0.08 – 0.15 (2)0.08 – 0.15 (3)Max. 0.8	(1)0.08 – 0.15 (2)0.08 – 0.15 (3)Max. 0.8	
Hard materials	—	—	—	—	—	—	—	—	—	★ 80 – 120	—	—	(1)0.02 – 0.05 (2)Not Recommended (3)Not Recommended	(1)0.03 – 0.07 (2)0.01 – 0.04 (3)Max. 0.1	—	—	

Above cutting conditions are for external grooving. Set both cutting speed and feed rate 10% lower for internal grooving.
MEGA indicates MEGACOAT.
MC indicates MEGACOAT Cermet.

GBA Inserts (GM Chipbreaker)

Workpiece	Recommended Insert Grades (Cutting Speed Vc: m/min)		(1) f for Grooving (mm/rev) (2) f for Turning (mm/rev) (3) ap for Turning (mm)					Remarks
	Cermet	MEGACOAT						
	TN620	PR1215	GBA43 R/L 140-010GM	GBA43 R/L 150-020GM	GBA43 R/L 175-020GM – 230-020GM	GBA43 R/L 250-030GM – 350-030GM	GBA43 R/L 400-040GM	
Carbon Steel (SxxC etc)	★ 80 – 240	☆ 80 – 220	(1)0.03 – 0.1 (2)0.03 – 0.08 (3)Max. 0.2	(1)0.03 – 0.12 (2)0.03 – 0.08 (3)Max. 0.3	(1)0.03 – 0.12 (2)0.03 – 0.09 (3)Max. 0.3	(1)0.04 – 0.15 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.15 (2)0.05 – 0.1 (3)Max. 0.8	Wet
Alloy Steel (SCM etc)	★ 80 – 220	☆ 80 – 200	(1)0.03 – 0.1 (2)0.03 – 0.08 (3)Max. 0.2	(1)0.03 – 0.12 (2)0.03 – 0.08 (3)Max. 0.3	(1)0.03 – 0.12 (2)0.03 – 0.09 (3)Max. 0.3	(1)0.04 – 0.15 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.15 (2)0.05 – 0.1 (3)Max. 0.8	
Stainless Steel (SUS304 etc)	—	★ 60 – 150	(1)0.03 – 0.1 (2)0.03 – 0.08 (3)Max. 0.2	(1)0.03 – 0.1 (2)0.03 – 0.08 (3)Max. 0.3	(1)0.03 – 0.1 (2)0.03 – 0.09 (3)Max. 0.3	(1)0.04 – 0.12 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.04 – 0.12 (2)0.05 – 0.1 (3)Max. 0.8	

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

GBA inserts (MY Chipbreaker)

Workpiece	Recommended Insert Grades(Cutting Speed Vc: m/min)								(1) f for Grooving (mm/rev) (2) f for Turning (mm/rev) (3) ap for Turning (mm)					Remarks
	Cermet		MEGA	PVD Coated Carbide		Carbide	CBN	PCD						
	TN6020	TC40N	PR1215	PR930	PR1115	KW10	KBN510	KPD001 (KPD010)	GBA43 R/L 175-020MY – 200-020MY	GBA43 R/L 230-020MY – 265-030MY	GBA43 R/L 300-030MY	GBA43 R/L 330-030MY – 350-030MY	GBA43 R/L 400-040MY	
Carbon Steel (SxxC etc)	☆ 150 – 220	—	★ 80 – 200	☆ 80 – 200	☆ 80 – 200	—	—	—	(1)0.03 – 0.08 (2)0.03 – 0.08 (3)Max. 0.3	(1)0.04 – 0.09 (2)0.04 – 0.09 (3)Max. 0.3	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.12 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.12 (2)0.05 – 0.1 (3)Max. 0.8	Wet
Alloy Steel (SCM etc)	☆ 130 – 200	—	★ 80 – 180	☆ 80 – 180	☆ 80 – 180	—	—	—	(1)0.03 – 0.07 (2)0.03 – 0.1 (3)Max. 0.3	(1)0.04 – 0.08 (2)0.04 – 0.08 (3)Max. 0.3	(1)0.05 – 0.09 (2)0.05 – 0.09 (3)Max. 0.5	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.8	
Stainless Steel (SUS304 etc)	☆ 70 – 150	—	☆ 60 – 150	☆ 60 – 150	★ 60 – 150	—	—	—	(1)0.03 – 0.07 (2)0.03 – 0.1 (3)Max. 0.3	(1)0.04 – 0.08 (2)0.04 – 0.08 (3)Max. 0.3	(1)0.05 – 0.09 (2)0.05 – 0.09 (3)Max. 0.5	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.5	(1)0.05 – 0.1 (2)0.05 – 0.1 (3)Max. 0.8	

Above cutting conditions are for external grooving. For internal grooving, set both cutting speed and feed rate 20% lower .
MEGA indicates MEGACOAT.