

THE NEW VALUE FRONTIER



CERATIP[®]

KYOCERA Cutting Tools

CP175-E

PR1115

New PVD coating for grooving

Advantage

- Due to the adoption of micro carbide, material toughness has greatly improved compared to the existing carbide.
- With “NEW fine Surface PVD Coating,” wear resistance and fracture resistance have greatly improved.

The application range map of PR1115

Widely available for handling continuous/interrupted cutting with medium to high speed

High speed [150m/min]	PR1115		
Medium speed [100m/min]			
Low speed [50m/min]	PR930		
	Continuous 	For general use 	Interrupted

Coating layer of PR1115

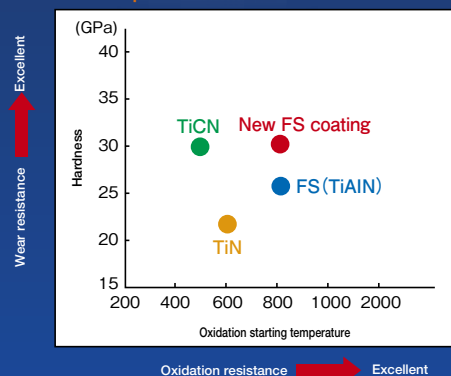
Sectional structure	Performance
<ul style="list-style-type: none"> → NEW FS (fine surface) coat (TiAlN) Suitable for high speed machining and excellent in wear resistance → Micro carbide base material 	<ul style="list-style-type: none"> • High hardness (30GPa) • High adhesiveness • Extremely precised and refined system • Superior oxidization resistance (800°C)

NEW FS(Fine Surface)Coat(TiAlN)





Adopting TiAlN PVD coat that brings smooth surface and wear resistance provides excellent filming and adhesiveness compared to the existing FS coat.



Relationship between hardness and oxidation resistance



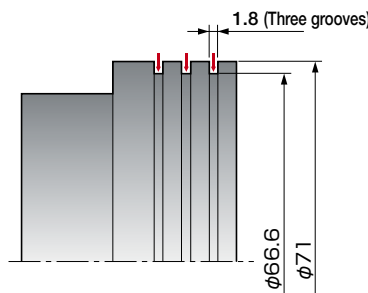


Standard stock number

Shape	Description	(Old description)	Dimension (mm)						PVD coating	
			W	B	R	A	T	φd	PR1115	
 Handed insert indicates Right-Hand	GBA32 ^{R/L}	033-005	-	0.33	0.8	R0.05	9.525	3.18	4.4	▲
		050-005	-	0.50	1.2					▲
		075-005	GBA32 ^{R/L} 075	0.75	2.0					▲
		095-005	095	0.95						▲
		100-005	100	1.00						▲
		125-020	125	1.25	R0.2	▲				
		145-020	-	1.45		2.5				▲
		150-020	-	1.50		2.5				▲
		175-020	-	1.75		▲				
		200-020	GBA32 ^{R/L} 200	2.00		2.5				▲
	250-020	250	2.50	▲						
	GBA43 ^{R/L}	125-010	-	1.25	2.0	R0.1	12.70	4.76	5.5	▲
		125-020	GBA43 ^{R/L} 125	1.25		R0.2				▲
		145-020	-	1.45	3.5	R0.2				▲
		150-010	-	1.50		R0.1				▲
		150-020	GBA43 ^{R/L} 150	1.50		R0.2				▲
		175-020	175	1.75	▲					
		185-020	185	1.85	5.0	R0.1				▲
		200-010	-	2.00						▲
		200-020	GBA43 ^{R/L} 200	2.00		R0.2				▲
		230-020	230	2.30		R0.1				▲
		250-010	-	2.50						▲
		250-030	-	2.50						▲
		265-030	-	2.65		R0.3				▲
		280-030	-	2.80	R0.1	▲				
300-010		-	3.00	▲						
300-030	-	3.00	▲							
330-030	-	3.30	R0.3	▲						
 Full-R (Round)	GBA43 ^{R/L}	350-010	-	3.50	5.0	R0.1	12.70	4.76	5.5	▲
		350-030	GBA43 ^{R/L} 350	3.50		R0.3				▲
		400-010	-	4.00		R0.1				▲
		400-040	GBA43 ^{R/L} 400	4.00	R0.4	▲				
		430-040	430	4.30		▲				
		450-040	450	4.50		▲				
		480-040	480	4.80		▲				
 With 3-D chipbreaker	GBA43 ^{R/L}	100-050R	GBA43 ^{R/L} 050R	1.00	2.0	R0.50	12.70	4.76	5.5	▲
		150-075R	075R	1.50	3.5	R0.75				▲
		200-100R	100R	2.00		R1.00				▲
		250-125R	125R	2.50	4.0	R1.25				▲
		300-150R	150R	3.00		R1.50				▲
		400-200R	200R	4.00	5.0	R2.00				▲
 With 3-D chipbreaker	GBA43 ^{R/L}	175-020MY	GBA43 ^{R/L} 175MY	1.75	3.5	R0.2	12.70	4.76	5.5	▲
		185-020MY	185MY	1.85						▲
		200-020MY	200MY	2.00						▲
		230-020MY	230MY	2.30						▲
		250-030MY	-	2.50	5.0	R0.3				▲
		265-030MY	-	2.65						▲
		300-030MY	-	3.00						▲
		330-030MY	-	3.30						▲
		350-030MY	-	3.50						▲
		400-040MY	-	4.00						R0.4

• With ※mark, edge width tolerance would be different only for GBA32R/L050. (0.50±0.05)
 • Dimension B shows available grooving depth.

▲:Scheduled to be Stock in January 2007

Cutting Data

S45C	PR1115
<ul style="list-style-type: none"> Sleeve V=160m/min d=2.2mm(Groove depth) f=0.05~0.12mm/rev Wet type GBA43L150-020 (PR1115) 	
	 200 pieces/corner
	 Competitor A coating 100 pieces/corner
	• PR1115 improved the tool life to more than twice that of competitor A.
	(It depends on our users' evaluation.)