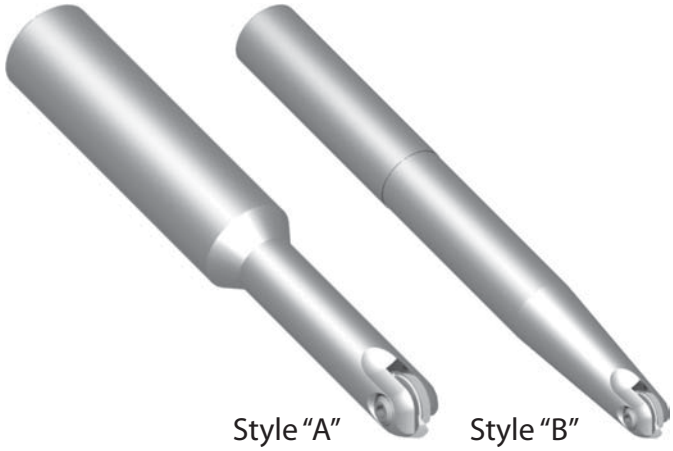
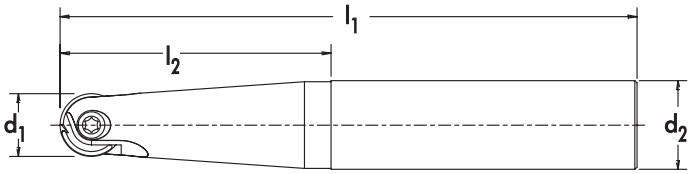
Ball Nose End Mills

- Positive cutting edge geometry for superior surface finishes, especially on inclined surfaces
- Inserts are precision ground to ensure precise milling
- Two cutter styles offer extended reach or extra rigid taper, and are available in diameters from 5/16" to 1-1/4"
- Screw-on mills, ranging in diameters from 3/8" to 1" allow for adaptation to modular screw-on systems
- Tools are designed to perform in conventional copy milling applications, as well as on advanced modern machining centres
- Leading edge technology produces superior finishes
- Eliminates solid carbide regrinds leading to cost effective machining
- High speed milling for reduced cycle times



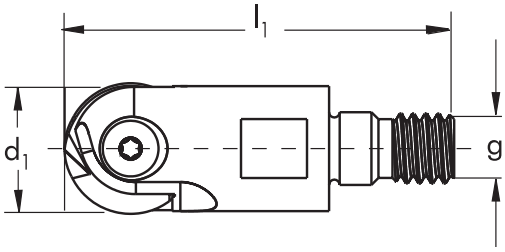


Designation	d¹	d²	l¹	l²	Style	Insert	Insert Screw	Wrench
BNK-0312-55T	.312	.500	5.50	1.90	B	XCEG-2.51	KBN-08	T8F
BNK-0375-35	.375	.500	3.56	1.34	A	XCCG-31.5 XCE_-31.5	KBN-10	T10F
BNK-0375-58T	.375	.500	5.87	1.37	B			
BNK-0500-35	.500	.500	3.56	1.25	A	XCCG-41.5-HG XCE_-41.5	KBN-15	T15F
BNK-0500-51	.500	.500	5.12	1.25	A			
BNK-0500-58	.500	.500	5.87	1.81	A			
BNK-0500-62T	.500	.625	6.28	2.31	B			
BNK-0625-55	.625	.625	5.50	1.37	A	XCCG-52-HG XCE_-52	KBN-15L	T15F
BNK-0625-62	.625	.625	6.28	2.00	A			
BNK-0625-68T	.625	.750	6.87	2.56	B			
BNK-0750-45	.750	.750	4.50	1.75	A	XCCG-62-HG XCE_-62	KBN-20	T20F
BNK-0750-62	.750	.750	6.28	1.75	A			
BNK-0750-68	.750	.750	6.87	2.37	A			
BNK-0750-75T	.750	1.000	7.50	3.00	B			
BNK-0750-82	.750	0.750	8.25	2.37	A			
BNK-0750-94T	.750	1.000	9.43	3.00	B			
BNK-1000-62	1.000	1.000	6.28	1.75	A	XCCG-82.5-HG XCE_-82.5	KBN-25	T25F
BNK-1000-75	1.000	1.000	7.50	2.75	A			
BNK-1000-82T	1.000	1.250	8.25	3.87	B			
BNK-1000-90	1.000	1.000	9.06	3.12	A			
BNK-1000-94T	1.000	1.200	9.43	3.87	B			
BNK-1250-68	1.250	1.250	6.87	2.18	A	XCCG-103-HG XCE_-103	KBN-25L	T25F
BNK-1250-82	1.250	1.250	8.25	3.12	A			
BNK-1250-94T	1.250	1.500	9.43	4.75	B			

Remember to use COPASLIP® anti-seize compound on all insert screws

BNK

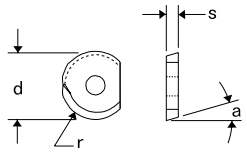
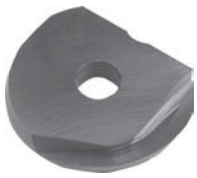
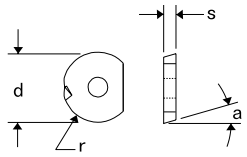
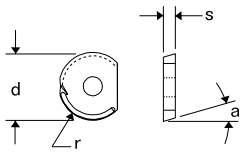
Ball Nose End Mills & Inserts



Designation	d¹	g	l¹	Insert	Insert Screw	Wrench
BNK-0375-TS	.375	M6	1.25	XCCG-31.5 XCE_-31.5	KBN-10	T10F
BNK-0500-TS	.500	M6	1.25	XCCG-41.5-HG XCE_-41.5	KBN-15	T15F
BNK-0625-TS	.625	M8	1.5	XCCG-52-HG XCE_-52	KBN-15L	T15F
BNK-0750-TS	.750	M10	1.5	XCCG-62-HG XCE_-62	KBN-20	T20F
BNK-1000-TS	1.000	M12	1.5	XCCG-82.5-HG XCE_-82.5	KBN-25	T25F

Remember to use COPASLIP® anti-seize compound on all insert screws

BNK Inserts

Insert		Designation	Dimensions				SLX	MPX	MPS
			d	r	s	a	Coated		
		XCCG-31.5-HG	.375	3/16	.098	7°		■	■
		XCCG-41.5-HG	.500	1/4	.098	7°		■	■
		XCCG-52-HG	.625	5/16	.118	7°		■	■
		XCCG-62-HG	.750	3/8	.118	7°		■	■
		XCCG-82.5-HG	1.000	1/2	.157	7°		■	□
		XCCG-103-HG	1.250	5/8	.197	7°		■	□
		XCEA-31.5	.375	3/16	.098	7°	■		■
		XCEA-41.5	.500	1/4	.098	7°	■		■
		XCEA-52	.625	5/16	.118	7°	■		■
		XCEA-62	.750	3/8	.118	7°	■		■
		XCEA-82.5	1.000	1/2	.157	7°	■		□
		XCEA-103	1.250	5/8	.197	7°	■		□
		XCEG-2.51	.312	5/32	.078	7°	■		■
		XCEG-31.5	.375	3/16	.098	7°	■		■
		XCEG-41.5	.500	1/4	.098	7°	■		■
		XCEG-52	.625	5/16	.118	7°	■		■
		XCEG-62	.750	3/8	.118	7°	■		■
		XCEG-82.5	1.000	1/2	.157	7°	■		□
		XCEG-103	1.250	5/8	.197	7°	■		□

Insert Geometry Descriptions:

XCCG-

- Innovative precision ground helical chipbreaker
- Advanced high-positive cutting rake
- Achieve higher speeds & feeds
- Produces less deflection
- Better insert tolerance
- Improves surface finishes
- Better chip control
- Creates less pressure
- Increased wear resistance from coating, which also reduces insert chipping
- Suited for soft, gummy materials, i.e.; aluminum, brass, low carbon steels and stainless
- First choice geometry for light roughing to precision finishing applications

XCEA-

- Precision ground non-chipbreaker
- For finishing in high carbon, die and mold steels
- Strongest cutting edge design

XCEG-

- Precision ground with positive chipbreaker
- For soft gummy materials, i.e. aluminum, brass, low carbon steels and stainless
- Light roughing to semi-finishing
- Economical alternative to the helical ground chipbreaker

Insert Grade Descriptions:

MPX

- PVD AlTiN Coating (black) on a micro grain C3 substrate
- Suitable for dies, molds, and other fabricating tools that operate at high temperature
- Performs well in difficult to machine materials, i.e. titanium, nickel alloys, as well as steel alloys and cast iron
- Excels in high speed and dry machining applications where coolant is restricted, and machining of hardened steel
- Ideal for high speed, high temperature cutting applications
- Excellent mallebility which makes inserts less susceptible to chipping
- Increased production with longer tool life
- High aluminum content in coating produces higher hardness and a smoother surface finish

MPS

- PVD TiAlN coating (bronze) on a micro grain C3 substrate
- Provides extended toughness beyond working parameters of MPX
- Better suited for difficult to machine and hardened materials, i.e stainless steel
- Ideal for a variety of high temperature cutting applications in various materials
- Can be used in all machining operations where edge heat/temperature is generated
- Exceptional high temperature oxidation resistance

SLX

- PVD AlTiN Coating (black) on a medium grain C5 substrate
- Good choice for machining all mold, die, and tool steels
- Tougher substrate is able to operate in harsher machining environments and can withstand more shock and vibration than MPX
- Can be used in light roughing to finishing operations