

AK SERIES

HIGH POSITIVE TURNING

Ground & polished high positive inserts for aluminium/non-ferrous roughing to finish turning and fine finishing of steel, stainless steel and exotics.

NON-FERROUS:

The inserts feature a buffed high rake chip breaker design that gives exceptional chip control from small to large depths with mirror finish results.

- Grade H01 (uncoated) is 1st choice for low silicon aluminium and general plastic
- Grade PD1000 (DLC coated) is 1st choice for abrasive non-ferrous materials

STEEL, STAINLESS & EXOTICS:

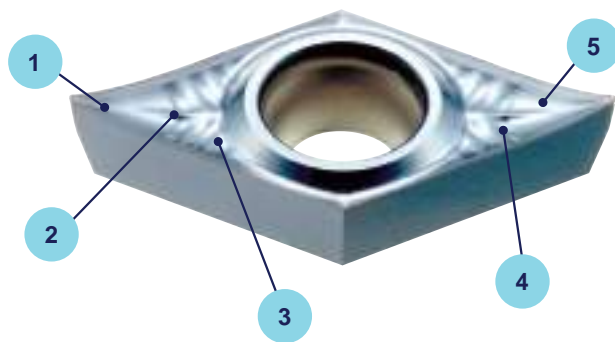
AK-PC5040 is an exceptional grade for fine finish turning of steel, stainless steel and HRSA's.

- Highly polished PVD coated grade prevents built-up edge.
- Sharp ground cutting edge provides exceptional surface finish from just 0.05mm depth of cut. Also excellent for use in boring heads for milling machines.



HIGH POSITIVE GROUND INSERTS FOR MIRROR FINISH TURNING

AK CHIP BREAKER GEOMETRY



1	GROUND CUTTING EDGE	Sharp high precision cutting edge ensures low cutting load and enables small depth of cut for finishing
2	UNIQUE RAKE ANGLE	Effective chip breaking & good chip flow due to unique rake angle design
3	3D TOP FACE	3-dimensional top face for longer tool life & excellent surface roughness
4	LONG TOOL LIFE	Tabby pattern & sharp cutting edge distributes the cutting load for long tool life
5	BUFFED TOP FACE	For excellent machining, reducing built-up edge, excellent chip flow

RECOMMENDED CUTTING CONDITIONS

Material Group	Material	H01 (m/min)	PD1000 (m/min)	PC5040 (m/min)	FEED f_n (mm/rev)	D.O.C. a_p (mm)*
Steel	Low Carbon Steel	-	-	100-210	<0.2	0.1-3.0
	Alloy Steel	-	-	80-190		
	Pre-Hardened Steel	-	-	80-140		
Stainless Steel	Austenitic Stainless (e.g.316)	-	-	80-180	0.02-0.15	0.1-2.0
	Martensitic Stainless (e.g.404)	-	-	80-190		
	Duplex, PH	-	-	80-160		
HRSA's	Inconel, Nickel Alloy	25-45	-	20-35	0.02-0.12	0.1-1.5
	Titanium, Ti-Alloy	30-55	-	40-70		
Non-Ferrous	Aluminium low si (<10%)	330-550	250-2500	-	0.03-0.5	0.05-5.0
	Aluminium high si (>10%)	130-220		-		
	Copper Alloy, Brass	250-600		-		
	Plastic	>500		-		

*Maximum depth of cut depends on insert type and radius

GRADE GUIDE

Grade	Features & Application	Steels	Stainless Steels	HRSA'S	Non Ferrous
H01	Uncoated polished K05 grade, first choice for low silicon aluminium roughing and finish turning. Also suitable for inconel & titanium finishing with small depth of cut.	-	-	✓✓	✓✓✓
PD1000	DLC coated polished K05 grade, first choice for high silicon aluminium continuous turning, abrasive plastics and copper alloys with double the tool life compared to uncoated grades.	-	-	-	✓✓✓
PC5040	PVD coated polished grade designed for fine finishing of steels, stainless steels, exotic materials and copper alloys. The high rake geometry combined with ground cutting edge and highly resistant grade gives mirror finish results and excellent tool life.	✓✓✓	✓✓✓	✓✓✓	-

AK SERIES HIGH POSITIVE TURNING INSERTS



GRADE				AK-H01		AK-H01		AK-PD1000		AK-PC5040		FEED f _n (mm/rev)	DEPTH OF CUT* ap (mm)			
TOLERANCE				G (HIGH PREC)		H (ULTRA PREC)		G (HIGH PREC)		G (HIGH PREC)						
ISO (HIGH PREC) d ± 0.025	ISO (ULTRA PREC) d ± 0.013	RADIUS		ORDER CODE	PRICE	ORDER CODE	PRICE	ORDER CODE	PRICE	ORDER CODE	PRICE					
CCGT060202-AK	CCHT060202-AK	0.2		1-03-000300		1-03-020211		1-02-032120		1-02-056452		0.01-0.12	0.05-3.00			
CCGT060204-AK	CCHT060204-AK	0.4		1-03-000311		1-03-020212		1-02-019830		1-02-056453		0.02-0.15	0.10-3.00			
CCGT060208-AK	CCHT060208-AK	0.8		1-03-000319		1-03-020213		1-02-060462		1-02-060413		0.02-0.20	0.10-4.00			
CCGT09T302-AK	CCHT09T302-AK	0.2		1-03-000322		1-03-020214		-		1-02-056454		0.02-0.20	0.05-3.00			
CCGT09T304-AK	CCHT09T304-AK	0.4		1-03-000329		1-03-020215		1-02-020097		1-02-056455		0.02-0.30	0.10-5.00			
CCGT09T308-AK	CCHT09T308-AK	0.8		1-03-000341		1-03-020216		1-02-050783		1-02-056456		0.03-0.50	0.10-5.00			
CCGT120402-AK	CCHT120402-AK	0.2		1-03-000349		1-03-020217		1-02-045753		1-02-060456		0.02-0.30	0.05-4.00			
CCGT120404-AK	CCHT120404-AK	0.4		1-03-000354		1-03-020218		-		1-02-056457		0.03-0.50	0.10-5.00			
CCGT120408-AK	CCHT120408-AK	0.8		1-03-000369		1-03-020219		1-02-018591		1-02-060415		0.04-0.80	0.10-5.50			
DCGT070202-AK	DCHT070202-AK	0.2		1-03-000489		1-03-020220		1-02-026935		1-02-056458		0.01-0.20	0.05-3.00			
DCGT070204-AK	DCHT070204-AK	0.4		1-03-000499		1-03-020221		1-02-020099		1-02-056459		0.02-0.30	0.10-4.00			
DCGT070208-AK	DCHT070208-AK	0.8		1-03-011358		1-03-020222		1-02-060463		1-02-056460		0.03-0.40	0.10-4.00			
DCGT11T302-AK	DCHT11T302-AK	0.2		1-03-000508		1-03-020223		1-02-020100		1-02-056461		0.02-0.30	0.05-4.00			
DCGT11T304-AK	DCHT11T304-AK	0.4		1-03-000517		1-03-020224		1-02-020101		1-02-056462		0.03-0.50	0.10-5.00			
DCGT11T308-AK	DCHT11T308-AK	0.8		1-03-000526		1-03-020225		1-02-020102		1-02-056463		0.03-0.50	0.10-5.00			
DCGT11T312-AK	DCHT11T312-AK	1.2		1-03-000533		1-03-020226		-		-		0.04-0.60	0.15-5.00			
RCGT0602M0-AK	RCHT0602M0-AK	3.0			1-03-000857		1-03-020227		1-02-020103		-		0.05-0.20	0.50-2.00		
RCGT0803M0-AK	RCHT0803M0-AK	4.0			1-03-000859		1-03-020228		1-02-060465		-		0.05-0.25	0.50-2.50		
RCGT1003M0-AK	RCHT1003M0-AK	5.0	1-03-000864			1-03-020229		1-02-028552		-		0.10-0.30	1.00-3.00			
RCGT1204M0-AK	RCHT1204M0-AK	6.0	1-03-000870			1-03-020231		1-02-060466		1-02-060454		0.10-0.30	1.00-3.00			
SCGT09T302-AK	SCHT09T302-AK	0.2		1-03-015095		1-03-020232		1-02-060467		1-02-056464		0.02-0.30	0.10-4.00			
SCGT09T304-AK	SCHT09T304-AK	0.4		1-03-000981		1-03-020233		1-02-060468		1-02-056465		0.04-0.40	0.10-5.00			
SCGT09T308-AK	SCHT09T308-AK	0.8		1-03-000985		1-03-020234		1-02-060469		1-02-060445		0.03-0.40	0.10-5.00			
SCGT120404-AK	SCHT120404-AK	0.4		1-03-000989		1-03-020235		1-02-060470		1-02-060441		0.03-0.50	0.10-5.00			
SCGT120408-AK	SCHT120408-AK	0.8		1-03-000992		1-03-020236		-		1-02-060446		0.04-0.60	0.15-5.50			
SCGT120416-AK	SCHT120416-AK	1.6		1-03-000996		1-03-020237		-		-		0.04-0.60	0.15-5.50			
TCGT090202-AK	TCHT090202-AK	0.2			1-03-009973		1-03-020238		1-02-060472		-		0.01-0.12	0.05-3.00		
TCGT090204-AK	TCHT090204-AK	0.4			1-03-009972		1-03-020239		1-02-060473		-		0.02-0.15	0.10-4.00		
TCGT110202-AK	TCHT110202-AK	0.2			1-03-002264		1-03-020240		-		1-02-056466		0.02-0.20	0.05-4.00		
TCGT110204-AK	TCHT110204-AK	0.4	1-03-002271			1-03-020241		1-02-019835		1-02-056467		0.03-0.30	0.10-4.00			
TCGT110208-AK	TCHT110208-AK	0.8	1-03-002279			1-03-020242		1-02-060475		-		0.03-0.40	0.10-5.00			
TCGT16T302-AK	TCHT16T302-AK	0.2	1-03-002286			1-03-020243		1-02-060476		1-02-060447		0.02-0.30	0.05-5.00			
TCGT16T304-AK	TCHT16T304-AK	0.4	1-03-002294			1-03-020244		-		1-02-060448		0.03-0.40	0.10-5.50			
TCGT16T308-AK	TCHT16T308-AK	0.8	1-03-002306			1-03-020245		1-02-036470		1-02-060449		0.03-0.50	0.10-5.50			
TCGT16T312-AK	TCHT16T312-AK	1.2	1-03-002309			1-03-020246		1-02-060478		-		0.04-0.60	0.15-5.50			
VBGT110302-AK	VBHT110302-AK	0.2		1-03-003436		1-03-020249		1-02-060480		1-02-060457		0.02-0.15	0.05-3.00			
VBGT110304-AK	VBHT110304-AK	0.4		1-03-003439		1-03-020250		1-02-060481		1-02-060458		0.02-0.15	0.10-4.00			
VBGT110308-AK	VBHT110308-AK	0.8		1-03-008943		1-03-020251		1-02-060482		-		0.03-0.18	0.10-5.00			
VBGT160402-AK	VBHT160402-AK	0.2		1-03-003444		1-03-020252		-		1-02-060450		0.03-0.30	0.05-4.00			
VBGT160404-AK	VBHT160404-AK	0.4		1-03-003449		1-03-020253		1-02-028039		1-02-060439		0.03-0.40	0.10-5.00			
VBGT160408-AK	VBHT160408-AK	0.8		1-03-003453		1-03-020254		1-02-060483		1-02-060451		0.03-0.50	0.10-5.00			
VBGT160412-AK	VBHT160412-AK	1.2		1-03-003454		1-03-020255		1-02-060484		-		0.05-0.60	0.10-5.50			
VCGT110301-AK	VCHT110301-AK	0.1			1-03-011565		1-03-020256		1-02-060492		-		0.02-0.15	0.05-3.00		
VCGT110302-AK	VCHT110302-AK	0.2			1-03-003478		1-03-020257		1-02-023707		1-02-056468		0.02-0.20	0.05-3.00		
VCGT110304-AK	VCHT110304-AK	0.4	1-03-003482			1-03-020258		1-02-020104		1-02-056469		0.02-0.25	0.10-4.00			
VCGT110308-AK	VCHT110308-AK	0.8	1-03-003487			1-03-020259		1-02-060493		1-02-060440		0.03-0.30	0.10-5.00			
VCGT130302-AK	VCHT130302-AK	0.2	1-03-003489			1-03-020260		1-02-060494		1-02-056470		0.02-0.35	0.10-5.00			
VCGT130304-AK	VCHT130304-AK	0.4	1-03-003491			1-03-020261		-		1-02-056471		0.03-0.35	0.10-5.00			
VCGT130308-AK	VCHT130308-AK	0.8	1-03-010153			1-03-020262		-		-		0.04-0.40	0.10-5.00			
VCGT160402-AK	VCHT160402-AK	0.2	1-03-003495			1-03-020263		1-02-023228		1-02-060443		0.02-0.30	0.05-5.00			
VCGT160404-AK	VCHT160404-AK	0.4	1-03-003503			1-03-020264		1-02-020105		1-02-060442		0.03-0.40	0.10-5.00			
VCGT160408-AK	VCHT160408-AK	0.8	1-03-003518			1-03-020265		1-02-019730		1-02-060444		0.03-0.50	0.10-5.00			
VCGT160412-AK	VCHT160412-AK	1.2	1-03-003529			1-03-020266		1-02-018816		-		0.03-0.50	0.10-5.00			
VCGT220525-AK	VCHT220525-AK	2.5	1-03-003536			1-03-020268		-		1-02-060452		0.03-0.60	0.10-7.00			
VCGT220530-AK	VCHT220530-AK	3.0	1-03-003539			1-03-020269		-		1-02-060453		0.05-0.70	0.10-7.00			
PACK SIZE					10 PCS		5 PCS		10 PCS		10 PCS		0.08-1.00		0.10-7.00	

*Maximum depth of cut should only be applied to aluminium or soft materials. For steel, stainless steel & HRSA's a small depth of cut should be applied for finishing applications only.