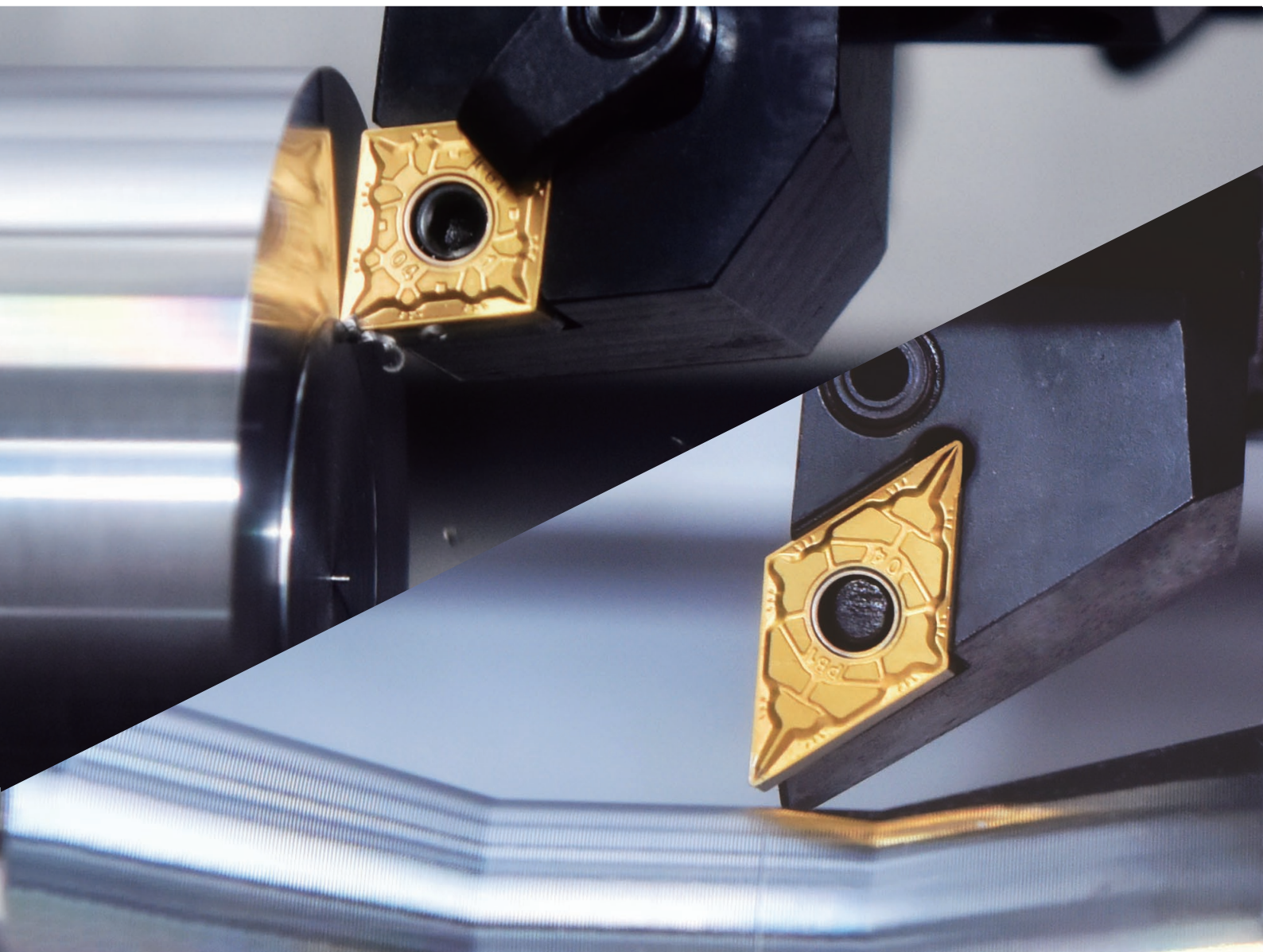


NEW
PRODUCT!

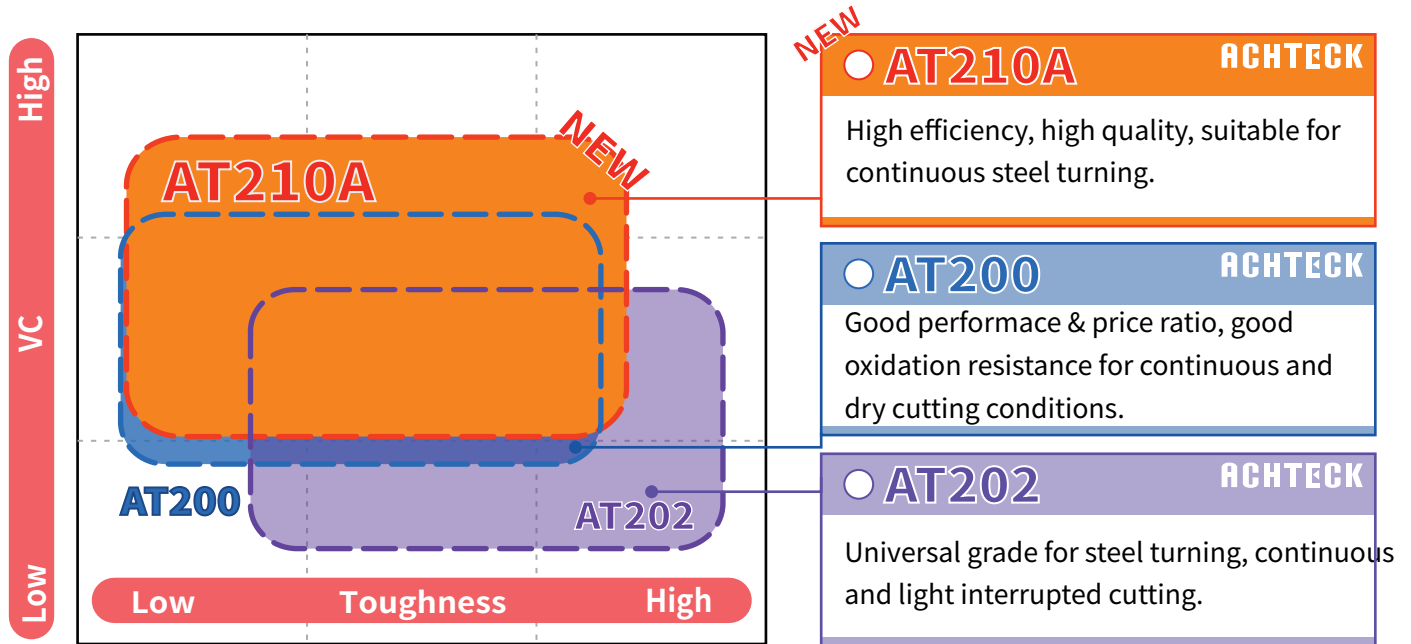
Coated Cermet Inserts for Steel Turning

AT210A

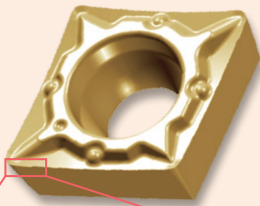




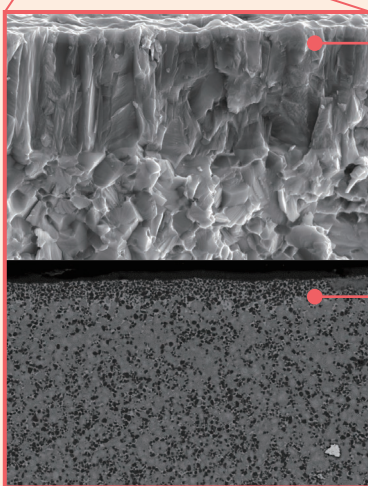
Applications



Features for AT210A



The substrate uses the new gradient-based design, combined with nano-alternative composite coating to achieve high-quality and high-efficient cutting for steel.



Nano-alternative layer design

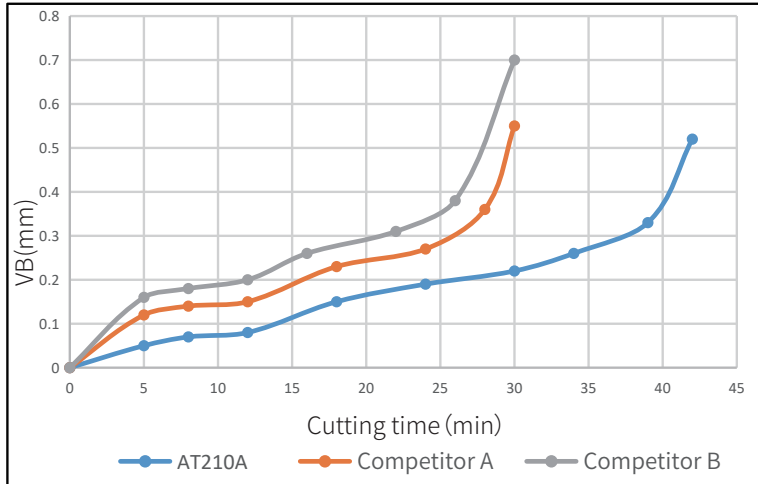
High coating adhesion and good oxidation resistance build a stable tool life, also can get smooth machining surface.

Gradient-based design

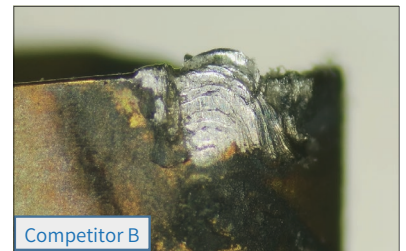
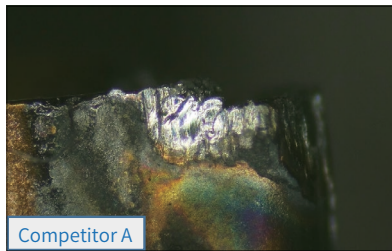
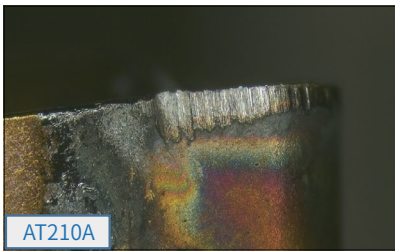
Good balance between wear resistance and toughness, because of the combination of ultra fine and hard grain composition. Used for steel continuous and medium steel turning.



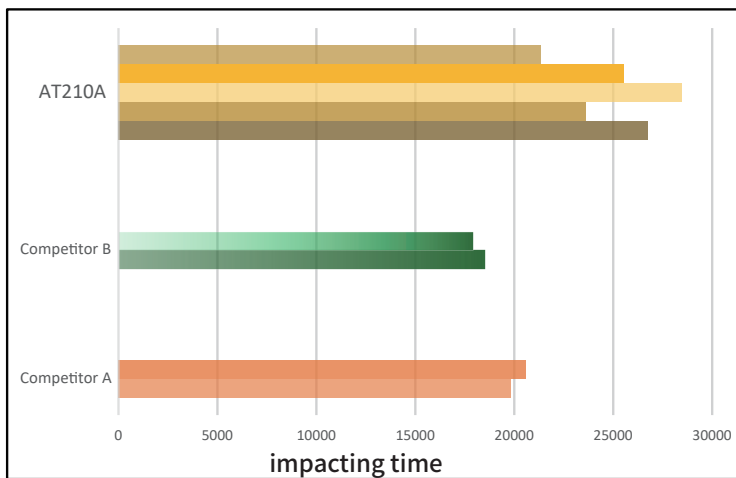
◆ Wear comparison



Material: 36CrNiMo4
Coolant: Wet
Cutting Condition
Insert: CNMG 120408**
Cutting Speed: $V_c=250\text{m/min}$
Feed: $f=0.2\text{mm/rev}$
Cutting Depth: $a_p=1.0\text{mm}$



◆ Chipping Comparison

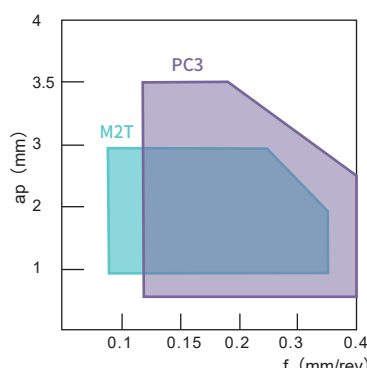
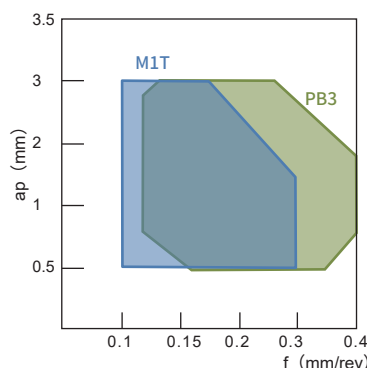
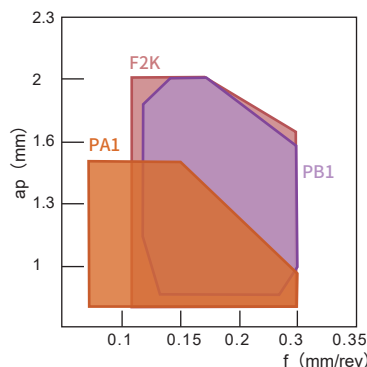
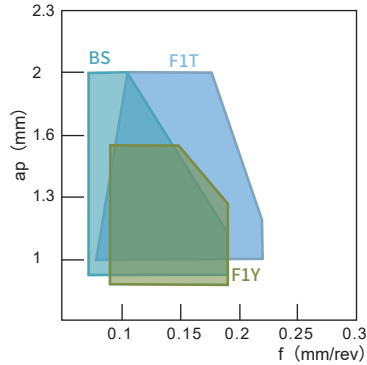


Material: C45
Coolant: Wet
Cutting Condition
Insert: CNMG 120408**
Cutting Speed: $V_c=150\text{m/min}$
Feed: $f=0.2\text{mm/rev}$
Cutting Depth: $a_p=1.0\text{mm}$





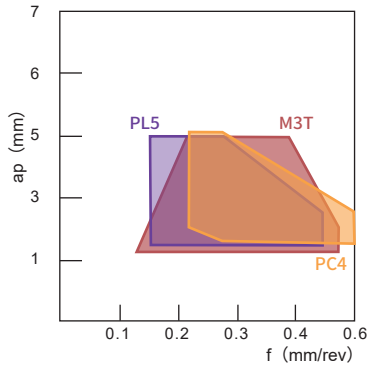
◆ **Negative Inserts**



Application	Geometry	Insert	Feature	Cross Section
Finish Turning	PA1		Used for steel finish turning, sharp cutting edge, high-precision, low cutting forces, good performance.	
	PB1		Used for universal finish steel turning, high stability.	
	F1T		Used for finish turning, good performance in chip removal with light cutting parameters.	
	F1Y		Good chip removal and low cutting forces, high surface quality.	
	F2K		Low cutting forces, good performance, high surface quality.	
Profile Turning	BS		Used for profile turning with good chip removal, sharp cutting edge in corner radius, low cutting forces with high surface quality, smooth chip removal.	
Semi-finish Turning	M1T		Large rake angle, low cutting forces, used at different cutting depths.	
	M2T		Low cutting forces with strong cutting edge, semi-finish turning geometry at large cutting depth, suitable for large cutting depth.	
	PB3		First choice for semi-finish steel turning at varied cutting depth, good chip removal.	
	PC3		Second choice for semi-finish steel turning.	
Medium Turning	PD3		High stability, strong cutting edge, used for interrupted turning.	

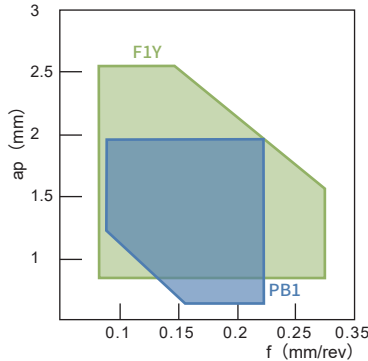
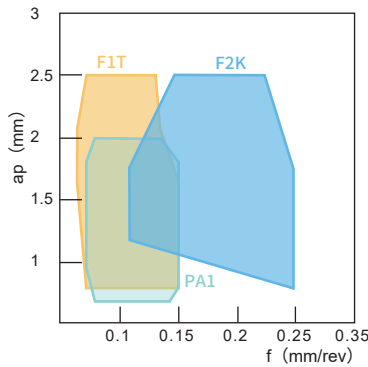


◆ **Negative Inserts**



Application	Geometry	Insert	Feature	Cross Section
Medium Turning	M3T		Smooth rake face, suitable for medium turning with high feed.	
	PC4		Full surrounded geometry, low cutting forces, universal turning for steel and cast iron.	
	PL5		Used for medium steel turning with low cutting forces and large cutting depth, suitable for long shaft parts.	

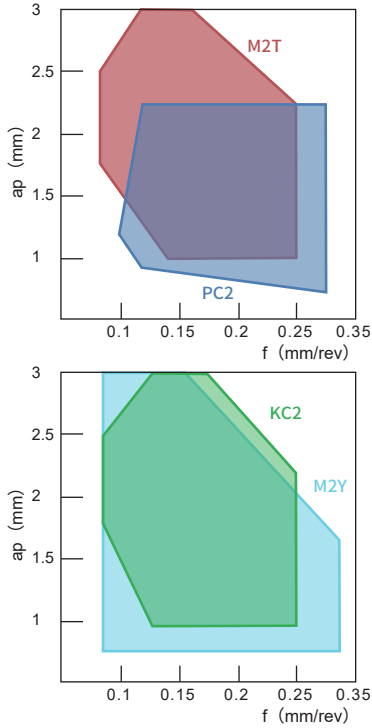
◆ **Positive Inserts**



Application	Geometry	Insert	Feature	Cross Section
Finish Turning	PA1		Used for steel finish steel, sharp cutting edge, good surface finish, low cutting forces, good performance.	
	PB1		Used for universal finish turning, high stability.	
	F1T		Low cutting forces, good performance in chip removal.	
	F1Y		Sharp cutting edge, good chip removal and low cutting forces.	
	F2K		Universal light turning, high surface quality.	




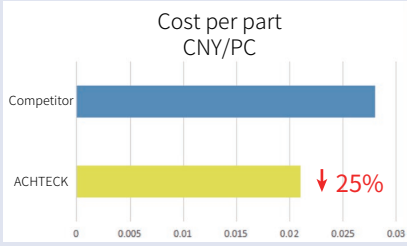
● **Positive Inserts**


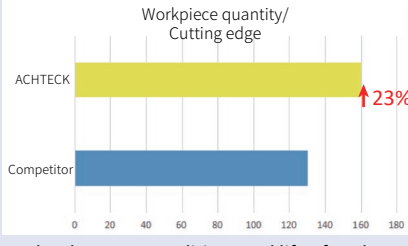


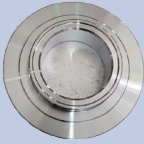
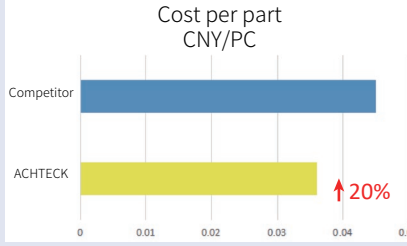
Application	Geometry	Insert	Feature	Cross Section
Semi-finish Turning	PC2		First choice for semi-finish turning, high strength in cutting edge and good chip removal.	
	M2T		Has a larger mild geometry design for cutting at high feed with smooth chip removal.	
	KC2		Big chip breaker design, good chip removal at large cutting depth.	
	M2Y		Low cutting force and strong cutting edge, used for semi-finish turning in unstable condition.	

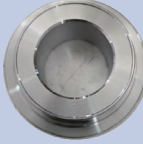
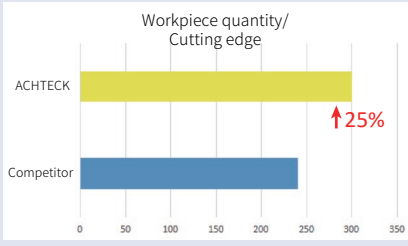


◆ Success Stories







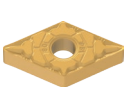
Insert	VNMG 160408E-PB1 AT210A
Workpiece	Motor shaft 
Material	C45
Application	external finish turning
Cutting Speed	182m/min
Feed	0.09mm/rev
Cutting Depth	0.5mm
Coolant	Emulsion
Result	 <p>Under the same condition, Cost per part is decreased by 25%.</p>

Insert	VNMG 160404E-BS AT210A
Workpiece	Transmission shaft 
Material	20MnCrS5
Application	external finish turning
Cutting Speed	292m/min
Feed	0.14mm/rev
Cutting Depth	0.2mm
Coolant	Emulsion
Result	 <p>Under the same condition, tool life of each cutting edge is increased by 23%.</p>

Insert	DNMG 150404E-PB1 AT210A
Workpiece	Transmission gear 
Material	100Cr6
Application	End face finish turning
Cutting Speed	375m/min
Feed	0.15mm/rev
Cutting Depth	0.25mm
Coolant	Emulsion
Result	 <p>Under the same condition, Cost per part is decreased by 20%.</p>


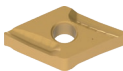
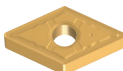
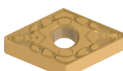
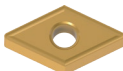




Insert	DCMT 11T304 F1T AT210A
Workpiece	Transmission gear 
Material	42Cr4
Application	Internal finish turning
Cutting Speed	167m/min
Feed	0.18mm/rev
Cutting Depth	0.25mm
Coolant	Emulsion
Result	 <p>Under the same condition, tool life of each cutting edge is increased by 25%.</p>

● Stock List---Negative Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	CNMG 120402E-PA1	0.04-0.25	0.02-1.5	12.7	4.76	5.16	0.2	●
	CNMG 120404E-PA1	0.04-0.28	0.02-1.5	12.7	4.76	5.16	0.4	●
	CNMG 120408E-PA1	0.05-0.35	0.02-1.5	12.7	4.76	5.16	0.8	○
	CNMG 120412E-PA1	0.05-0.42	0.02-1.5	12.7	4.76	5.16	1.2	○
	CNMG 120404E-PB1	0.05-0.15	0.26-3.2	12.7	12.9	4.76	0.4	●
	CNMG 120408E-PB1	0.10-0.30	0.52-3.2	12.7	12.9	4.76	0.8	●
	CNMG 120404E-PB3	0.06-0.18	0.30-3.5	12.7	12.9	4.76	0.4	●
	CNMG 120408E-PB3	0.12-0.36	0.60-3.5	12.7	12.9	4.76	0.8	●
	CNMG 120412E-PB3	0.18-0.54	0.90-3.5	12.7	12.9	4.76	1.2	○
	CNMG 120404E-PC3	0.07-0.20	0.34-3.9	12.7	12.9	4.76	0.4	○
	CNMG 120408E-PC3	0.14-0.40	0.68-3.9	12.7	12.9	4.76	0.8	○
	CNMG 120412E-PC3	0.20-0.60	1.02-3.9	12.7	12.9	4.76	1.2	○
	CNMG 120404E-PD3	0.08-0.22	0.40-4.3	12.7	12.9	4.76	0.4	○
	CNMG 120408E-PD3	0.15-0.44	0.80-4.3	12.7	12.9	4.76	0.8	○
	CNMG 120412E-PD3	0.23-0.66	1.20-4.3	12.7	12.9	4.76	1.2	○
	DNMG 150402E-PA1	0.04-0.25	0.20-1.5	12.7	4.76	5.16	0.2	●
	DNMG 150404E-PA1	0.04-0.28	0.20-1.5	12.7	4.76	5.16	0.4	●
	DNMG 150408E-PA1	0.05-0.35	0.20-1.5	12.7	4.76	5.16	0.8	○
	DNMG 150412E-PA1	0.05-0.42	0.20-1.5	12.7	4.76	5.16	1.2	○
	DNMG 150602E-PA1	0.04-0.25	0.20-1.5	12.7	6.35	5.16	0.2	●
	DNMG 150604E-PA1	0.04-0.28	0.20-1.5	12.7	6.35	5.16	0.4	●
	DNMG 150608E-PA1	0.05-0.35	0.20-1.5	12.7	6.35	5.16	0.8	○
	DNMG 150612E-PA1	0.05-0.42	0.20-1.5	12.7	6.35	5.16	1.2	○
	DNMG 110404E-PB1	0.05-0.15	0.26-2.3	9.525	11.62	4.76	0.4	●
	DNMG 150404E-PB1	0.05-0.15	0.26-3.1	12.7	15.5	4.76	0.4	●
	DNMG 150408E-PB1	0.10-0.30	0.52-3.1	12.7	15.5	4.76	0.8	○
	DNMG 150604E-PB1	0.05-0.15	0.26-3.1	12.7	15.5	6.35	0.4	●
	DNMG 150608E-PB1	0.10-0.30	0.52-3.1	12.7	15.5	6.35	0.8	○

Remark: ● Stocked ○ Non-stocked (Please check the stock)

◆ Stock List---Negative Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	DNMG 150404E-PB3	0.06-0.18	0.30-3.1	12.7	15.5	4.76	0.4	●
	DNMG 150408E-PB3	0.12-0.36	0.60-3.1	12.7	15.5	4.76	0.8	○
	DNMG 150412E-PB3	0.18-0.54	0.90-3.1	12.7	4.76	5.16	1.2	○
	DNMG 150604E-PB3	0.06-0.18	0.30-3.1	12.7	6.35	5.16	0.4	○
	DNMG 150608E-PB3	0.12-0.36	0.60-3.1	12.7	6.35	5.16	0.8	○
	DNMG 150612E-PB3	0.18-0.54	0.90-3.1	12.7	6.35	5.16	1.2	○
	DNMG 150404R-M1T	0.10-0.35	0.70-4.5	12.7	4.76	5.16	0.4	●
	DNMG 150404L-M1T	0.10-0.35	0.70-4.5	12.7	4.76	5.16	0.4	●
	DNMG 150404E-PC3	0.07-0.20	0.34-3.5	12.7	4.76	5.16	0.4	●
	DNMG 150408E-PC3	0.14-0.40	0.68-3.5	12.7	4.76	5.16	0.8	○
	DNMG 150412E-PC3	0.20-0.60	1.02-3.5	12.7	4.76	5.16	1.2	○
	DNMG 150604E-PC3	0.07-0.20	0.34-3.5	12.7	6.35	5.16	0.4	●
	DNMG 150608E-PC3	0.14-0.40	0.68-3.5	12.7	6.35	5.16	0.8	○
	DNMG 150612E-PC3	0.20-0.60	1.02-3.5	12.7	6.35	5.16	1.2	○
	DNMG 110404E-PD3	0.08-0.22	0.40-2.9	9.525	4.76	3.81	0.4	○
	DNMG 110408E-PD3	0.15-0.44	0.80-2.9	9.525	4.76	3.81	0.8	○
	DNMG 150404E-PD3	0.08-0.22	0.40-3.9	12.7	4.76	5.16	0.4	○
	DNMG 150408E-PD3	0.15-0.44	0.80-3.9	12.7	4.76	5.16	0.8	○
	DNMG 150404E-PC4	0.08-0.22	0.40-3.9	12.7	4.76	5.16	0.4	○
	DNMG 150408E-PC4	0.15-0.44	0.80-3.9	12.7	4.76	5.16	0.8	○
	DNMG 150604E-PC4	0.08-0.22	0.40-3.9	12.7	6.35	5.16	0.4	○
	DNMG 150608E-PC4	0.15-0.44	0.80-3.9	12.7	6.35	5.16	0.8	○
	SNMG 120404E-PB1	0.26-3.2	0.05-0.15	12.7	4.76	5.16	0.4	●
	SNMG 120408E-PB1	0.10-0.30	0.52-3.2	12.7	4.76	5.16	0.8	●
	SNMG 120404E-PC3	0.07-0.20	0.34-3.8	12.7	4.76	5.16	0.4	○
	SNMG 120408E-PC3	0.14-0.40	0.68-3.8	12.7	4.76	5.16	0.8	○
	SNMG 120412E-PC3	0.20-0.60	1.02-3.8	12.7	4.76	5.16	1.2	○
	SNMG 120404E-PD3	0.08-0.22	0.40-4.2	12.7	4.76	5.16	0.4	○
	SNMG 120408E-PD3	0.15-0.44	0.80-4.2	12.7	4.76	5.16	0.8	○
	SNMG 120412E-PD3	0.23-0.66	1.20-4.2	12.7	4.76	5.16	1.2	○
	SNMG 120404-M3T	0.20-0.40	1.00-4.0	12.7	4.76	5.16	0.4	●
	SNMG 120408-M3T	0.20-0.40	1.00-4.0	12.7	4.76	5.16	0.8	●

Remark: ● Stocked ○ Non-stocked (Please check the stock)






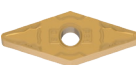

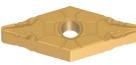
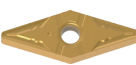
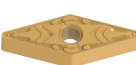


● Stock List---Negative Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	SNMG 120404E-PC4	0.08-0.22	0.40-4.2	12.7	4.76	5.16	0.4	○
	SNMG 120408E-PC4	0.15-0.44	0.80-4.2	12.7	4.76	5.16	0.8	○
	SNMG 120412E-PC4	0.23-0.66	1.20-4.2	12.7	4.76	5.16	1.2	○
	TNMG 160402E-PA1	0.04-0.25	0.20-1.5	9.525	4.76	3.81	0.2	●
	TNMG 160404E-PA1	0.04-0.28	0.20-1.5	9.525	4.76	3.81	0.4	●
	TNMG 160408E-PA1	0.05-0.35	0.20-1.5	9.525	4.76	3.81	0.8	●
	TNMG 160412E-PA1	0.05-0.42	0.20-1.5	9.525	4.76	3.81	1.2	○
	TNMG 160404E-PB1	0.05-0.15	0.26-3.1	9.525	4.76	3.81	0.4	●
	TNMG 160408E-PB1	0.10-0.30	0.52-3.1	9.525	4.76	3.81	0.8	●
	TNMG 160412E-PB1	0.15-0.45	0.78-3.1	9.525	4.76	3.81	1.2	○
	TNMG 160404-F1T	0.05-0.15	0.50-2.5	9.525	4.76	3.81	0.4	●
	TNMG 160408-F1T	0.05-0.15	0.50-2.5	9.525	4.76	3.81	0.8	●
	TNMG 160404-F1Y	0.08-0.20	0.30-1.5	9.525	4.76	3.81	0.4	●
	TNMG 160408-F1Y	0.08-0.20	0.30-1.5	9.525	4.76	3.81	0.8	●
	TNMG 160404R-M1T	0.10-0.30	0.70-3.5	9.525	4.76	3.81	0.4	●
	TNMG 160404L-M1T	0.10-0.30	0.70-3.5	9.525	4.76	3.81	0.4	●
	TNMG 160408R-M1T	0.10-0.30	0.70-3.5	9.525	4.76	3.81	0.4	●
	TNMG 160408L-M1T	0.10-0.30	0.70-3.5	9.525	4.76	3.81	0.8	●
	TNMG 160404-F2K	0.08-0.20	0.50-2.0	9.525	4.76	3.81	0.4	●
	TNMG 160408-F2K	0.10-0.25	0.50-2.0	9.525	4.76	3.81	0.8	●
	TNMG 160404E-PB3	0.06-0.18	0.30-3.3	9.525	4.76	3.81	0.4	●
	TNMG 160408E-PB3	0.12-0.36	0.60-3.3	9.525	4.76	3.81	0.8	●
	TNMG 160412E-PB3	0.18-0.54	0.90-3.3	9.525	4.76	3.81	1.2	○
	TNMG 160404R-M2T	0.10-0.30	0.70-3.5	9.525	4.76	3.81	0.8	●
	TNMG 160404L-M2T	0.10-0.30	0.70-3.5	9.525	4.76	3.81	0.8	●
	TNMG 160404E-PC3	0.07-0.20	0.34-3.7	9.525	4.76	3.81	0.4	○
	TNMG 160408E-PC3	0.14-0.40	0.68-3.7	9.525	4.76	3.81	0.8	○
	TNMG 160412E-PC3	0.20-0.60	1.02-3.7	9.525	4.76	3.81	1.2	○

Remark: ● Stocked ○ Non-stocked (Please check the stock)

Stock List---Negative Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	TNMG 160404E-PD3	0.08-0.22	0.40-4.1	9.525	4.76	3.81	0.4	○
	TNMG 160408E-PD3	0.15-0.44	0.80-4.1	9.525	4.76	3.81	0.8	○
	TNMG 160412E-PD3	0.23-0.66	1.20-4.1	9.525	4.76	3.81	1.2	○
	TNMG 160404-M3T	0.20-0.40	1.00-4.0	9.525	4.76	3.81	0.4	●
	TNMG 160408-M3T	0.20-0.40	1.00-4.0	9.525	4.76	3.81	0.8	●
	TNMG 160404R-PL5	0.08-0.22	0.40-4.1	9.525	4.76	3.81	0.4	○
	TNMG 160408R-PL5	0.15-0.44	0.80-4.1	9.525	4.76	3.81	0.8	○
	TNMG 160404L-PL5	0.08-0.22	0.40-4.1	9.525	4.76	3.81	0.4	○
	TNMG 160408L-PL5	0.15-0.44	0.80-4.1	9.525	4.76	3.81	0.8	○
	TNMG 160404E-PC4	0.08-0.22	0.40-4.1	9.525	4.76	3.81	0.4	○
	TNMG 160408E-PC4	0.15-0.44	0.80-4.1	9.525	4.76	3.81	0.8	○
	TNMG 160412E-PC4	0.23-0.66	1.20-4.1	9.525	4.76	3.81	1.2	○
	VNMG 160402E-PA1	0.04-0.25	0.20-1.5	9.525	4.76	3.81	0.2	●
	VNMG 160404E-PA1	0.04-0.28	0.20-1.5	9.525	4.76	3.81	0.4	●
	VNMG 160408E-PA1	0.05-0.35	0.20-1.5	9.525	4.76	3.81	0.8	○
	VNMG 160412E-PA1	0.05-0.42	0.20-1.5	9.525	4.76	3.81	1.2	○
	VNMG 160404E-PB1	0.05-0.15	0.26-2.1	9.525	4.76	3.81	0.4	●
	VNMG 160408E-PB1	0.10-0.30	0.52-2.1	9.525	4.76	3.81	0.8	●
	VNMG 160404-F2K	0.08-0.20	0.50-2.0	9.525	4.76	3.81	0.4	●
	VNMG 160408-F2K	0.10-0.25	0.50-2.0	9.525	4.76	3.81	0.8	●
	VNMG 160404E-PB3	0.06-0.18	0.30-3.1	9.525	4.76	3.81	0.4	●
	VNMG 160408E-PB3	0.12-0.36	0.60-3.1	9.525	4.76	3.81	0.8	●
	VNMG 160412E-PB3	0.18-0.54	0.90-3.1	9.525	4.76	3.81	1.2	○
	VNMG 160404E-PC3	0.07-0.20	0.34-3.3	9.525	4.76	3.81	0.4	○
	VNMG 160408E-PC3	0.14-0.40	0.68-3.3	9.525	4.76	3.81	0.8	○
	VNMG 160412E-PC3	0.20-0.60	1.02-3.3	9.525	4.76	3.81	1.2	○
	VNMG 160404E-PD3	0.08-0.22	0.40-3.3	9.525	4.76	3.81	0.4	○
	VNMG 160408E-PD3	0.15-0.44	0.80-3.3	9.525	4.76	3.81	0.8	○
	VNMG 160412E-PD3	0.23-0.66	1.20-3.3	9.525	4.76	3.81	1.2	○

Remark: ● Stocked ○ Non-stocked (Please check the stock)

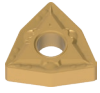

Stock List---Negative Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	VNMG 160404-M3T	0.20-0.40	1.00-4.0	9.525	4.76	3.81	0.4	●
	VNMG 160408-M3T	0.20-0.40	1.00-4.0	9.525	4.76	3.81	0.8	●
	VNMG 160404E-PC4	0.08-0.22	0.40-3.3	9.525	4.76	3.81	0.4	○
	VNMG 160408E-PC4	0.15-0.44	0.80-3.3	9.525	4.76	3.81	0.8	○
	VNMG 160412E-PC4	0.23-0.66	1.20-3.3	9.525	4.76	3.81	1.2	○
	VNMG 160404E-BS	0.08-0.20	0.20-2.0	9.525	4.76	3.81	0.4	●
	VNMG 160408E-BS	0.08-0.20	0.20-2.0	9.525	4.76	3.81	0.8	●
	WNMG 080402E-PA1	0.04-0.25	0.20-1.5	12.7	4.76	5.16	0.2	●
	WNMG 080404E-PA1	0.04-0.28	0.20-1.5	12.7	4.76	5.16	0.4	●
	WNMG 080408E-PA1	0.05-0.35	0.20-1.5	12.7	4.76	5.16	0.8	●
	WNMG 080412E-PA1	0.05-0.42	0.20-1.5	12.7	4.76	5.16	1.2	○
	WNMG 080404-F1T	0.05-0.15	0.50-2.5	9.525	4.76	5.16	0.4	●
	WNMG 080408-F1T	0.05-0.15	0.50-2.5	9.525	4.76	5.16	0.8	●
	WNMG 080404E-PB1	0.05-0.15	0.26-2.2	12.7	4.76	5.16	0.4	●
	WNMG 080408E-PB1	0.10-0.30	0.52-2.2	12.7	4.76	5.16	0.8	●
	WNMG 080412E-PB1	0.15-0.45	0.78-2.2	12.7	4.76	5.16	1.2	●
	WNMG 080404-F1Y	0.08-0.20	0.30-1.5	12.7	4.76	5.16	0.4	●
	WNMG 080408-F1Y	0.08-0.20	0.30-1.5	12.7	4.76	5.16	0.8	●
	WNMG 080404-F2K	0.12-0.24	0.50-2.5	12.7	4.76	5.16	0.4	●
	WNMG 080408-F2K	0.15-0.30	0.50-2.5	12.7	4.76	5.16	0.8	●
	WNMG 080404E-PB3	0.06-0.18	0.30-2.3	12.7	4.76	5.16	0.4	●
	WNMG 080408E-PB3	0.12-0.36	0.60-2.3	12.7	4.76	5.16	0.8	●
	WNMG 080412E-PB3	0.18-0.54	0.90-2.3	12.7	4.76	5.16	1.2	●
	WNMG 080404E-PC3	0.07-0.20	0.34-2.6	12.7	4.76	5.16	0.4	○
	WNMG 080408E-PC3	0.14-0.40	0.68-2.6	12.7	4.76	5.16	0.8	○
	WNMG 080412E-PC3	0.20-0.60	1.02-2.6	12.7	4.76	5.16	1.2	○
	WNMG 080404E-PD3	0.08-0.22	0.40-2.9	12.7	4.76	5.16	0.4	○
	WNMG 080408E-PD3	0.15-0.44	0.80-2.9	12.7	4.76	5.16	0.8	○
	WNMG 080412E-PD3	0.23-0.66	1.20-2.9	12.7	4.76	5.16	1.2	○

Remark: ● Stocked ○ Non-stocked (Please check the stock)


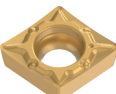
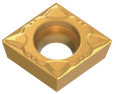


◆ Stock List---Negative Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	WNMG 080404-M3T	0.20-0.40	1.00-4.0	9.525	4.76	5.16	0.4	●
	WNMG 080408-M3T	0.20-0.40	1.00-4.0	9.525	4.76	5.16	0.8	●
	WNMG 080404E-PC4	0.08-0.22	0.40-2.9	12.7	4.76	5.16	0.4	○
	WNMG 080408E-PC4	0.15-0.44	0.80-2.9	12.7	4.76	5.16	0.8	○
	WNMG 080412E-PC4	0.23-0.66	1.20-2.9	12.7	4.76	5.16	1.2	○


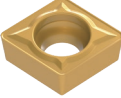
Remark: ● Stocked ○ Non-stocked (Please check the stock)

◆ Stock List---Positive Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	CCMT 060202E-PA1	0.04-0.25	00.10-0.8	6.35	2.38	2.8	0.2	●
	CCMT 09T308E-PA1	0.05-0.30	0.10-0.8	9.525	3.97	4.4	0.8	●
	CCMT 060202-F1T	0.05-0.15	0.3-1.5	6.35	2.38	2.8	0.2	●
	CCMT 060204-F1T	0.05-0.15	0.3-1.5	6.35	2.38	2.8	0.4	●
	CCMT 09T304-F1T	0.10-0.25	0.60-1.5	9.525	9.67	3.97	0.4	●
	CCMT 09T308-F1T	0.10-0.25	0.60-1.5	9.525	9.67	3.97	0.8	●
	CCMT 060202E-PB1	0.02-0.07	0.15-1.6	6.35	2.38	2.8	0.2	●
	CCMT 060204E-PB1	0.04-0.14	0.30-1.6	6.35	2.38	2.8	0.4	●
	CCMT 060208E-PB1	0.09-0.28	0.60-1.6	6.35	2.38	2.8	0.8	○
	CCMT 09T302E-PB1	0.02-0.07	0.15-2.4	9.525	3.97	4.4	0.2	○
	CCMT 09T304E-PB1	0.04-0.14	0.30-2.4	9.525	3.97	4.4	0.4	●
	CCMT 09T308E-PB1	0.09-0.28	0.60-2.4	9.525	3.97	4.4	0.8	●
	CPMT 080202E-PB1	0.02-0.07	0.15-2.0	7.94	2.38	3.5	0.2	○
	CPMT 080204E-PB1	0.04-0.14	0.30-2.0	7.94	2.38	3.5	0.4	○
	CPMT 090302E-PB1	0.02-0.07	0.15-2.4	9.525	3.18	4.4	0.2	○
	CPMT 090304E-PB1	0.04-0.14	0.30-2.4	9.525	3.18	4.4	0.4	○
CPMT 090308E-PB1	0.09-0.28	0.60-2.4	9.525	3.18	4.4	0.8	○	


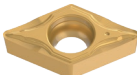
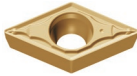
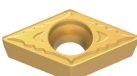

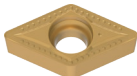
Remark: ● Stocked ○ Non-stocked (Please check the stock)

Stock List---Positive Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	CCMT 060204E-PC2	0.05-0.16	0.35-1.9	6.35	2.38	2.8	0.4	●
	CCMT 060208E-PC2	0.10-0.32	0.70-1.9	6.35	2.38	2.8	0.8	●
	CCMT 09T304E-PC2	0.05-0.16	0.35-2.9	9.525	3.97	4.4	0.4	●
	CCMT 09T308E-PC2	0.10-0.32	0.70-2.9	9.525	3.97	4.4	0.8	●
	CCMT 120404E-PC2	0.05-0.16	0.35-3.9	12.7	4.76	5.5	0.4	●
	CCMT 120408E-PC2	0.10-0.32	0.70-3.9	12.7	4.76	5.5	0.8	●
	CCMT 120412E-PC2	0.16-0.48	1.05-3.9	12.7	4.76	5.5	1.2	○
	CPMT 090304-PC2	0.05-0.15	0.35-2.9	9.525	3.18	4.4	0.4	○
	CPMT 090308-PC2	0.10-0.32	0.70-2.9	9.525	3.18	4.4	0.8	○
	CCMT 060202-F2K	0.06-0.15	0.50-2.0	6.35	2.38	2.8	0.2	●
	CCMT 060204-F2K	0.08-0.20	0.50-2.0	6.35	2.38	2.8	0.4	●
	CCMT 09T302-F2K	0.06-0.15	0.50-2.0	9.525	3.97	4.4	0.2	●
	CCMT 09T304-F2K	0.08-0.20	0.50-2.0	9.525	3.97	4.4	0.4	●
	CCMT 09T308-F2K	0.10-0.25	0.50-2.0	9.525	3.97	4.4	0.8	●
	CCMT 060204-M2Y	0.08-0.25	0.50-2.5	6.35	2.38	2.8	0.4	●
	CCMT 09T304-M2T	0.10-0.25	0.70-3.5	9.525	3.97	4.4	0.4	●
	CCMT 09T308-M2T	0.10-0.25	0.70-3.5	9.525	3.97	4.4	0.8	●
	CCMT 060204E-KC2	0.06-0.18	0.40-2.1	6.35	2.38	2.8	0.4	●
	CCMT 060208E-KC2	0.12-0.36	0.80-2.1	6.35	2.38	2.8	0.8	●
	CCMT 09T304E-KC2	0.06-0.18	0.40-3.2	9.525	3.97	4.4	0.4	●
	CCMT 09T308E-KC2	0.12-0.36	0.80-3.2	9.525	3.97	4.4	0.8	●
	CCMT 120404E-KC2	0.06-0.18	0.40-4.3	12.7	4.76	5.5	0.4	●
	CCMT 120408E-KC2	0.12-0.36	0.80-4.3	12.7	4.76	5.5	0.8	●
	CCMT 120412E-KC2	0.18-0.54	1.20-4.3	12.7	4.76	5.5	1.2	○








Remark: ● Stocked ○ Non-stocked (Please check the stock)

Stock List---Positive Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	DCMT 11T302E-PA1	0.04-0.25	0.10-1.0	9.525	3.97	4.4	0.2	●
	DCMT 11T304E-PA1	0.04-0.25	0.10-1.0	9.525	3.97	4.4	0.4	●
	DCMT 11T308E-PA1	0.05-0.30	0.10-1.0	9.525	3.97	4.4	0.8	○
	DCMT 070202-F1T	0.07-0.20	0.40-1.5	6.35	2.38	2.8	0.2	●
	DCMT 070204-F1T	0.07-0.20	0.40-1.5	6.35	2.38	2.8	0.4	●
	DCMT 11T302-F1T	0.07-0.20	0.40-1.5	9.525	3.97	4.4	0.2	●
	DCMT 11T304-F1T	0.10-0.25	0.60-1.5	9.525	3.97	4.4	0.4	●
	DCMT 11T308-F1T	0.10-0.25	0.60-1.5	9.525	3.97	4.4	0.8	●
	DCMT 11T304-F1Y	0.08-0.25	0.50-2.0	9.525	11.62	3.97	0.4	●
	DCMT 070202E-PB1	0.02-0.07	0.15-1.5	6.35	2.38	2.8	0.2	●
	DCMT 070204E-PB1	0.04-0.14	0.30-1.5	6.35	2.38	2.8	0.4	●
	DCMT 11T302E-PB1	0.02-0.07	0.15-2.3	9.525	3.97	4.4	0.2	●
	DCMT 11T304E-PB1	0.04-0.14	0.30-2.3	9.525	3.97	4.4	0.4	●
	DCMT 11T308E-PB1	0.09-0.28	0.60-2.3	9.525	3.97	4.4	0.8	●
	DCMT 070204E-PC2	0.05-0.16	0.35-2.1	6.35	2.38	2.8	0.4	●
	DCMT 070208E-PC2	0.10-0.32	0.70-2.1	6.35	2.38	2.8	0.8	●
	DCMT 11T304E-PC2	0.05-0.16	0.35-3.1	9.525	3.97	4.4	0.4	●
	DCMT 11T308E-PC2	0.10-0.32	0.70-3.1	9.525	3.97	4.4	0.8	●
	DCMT 11T312E-PC2	0.16-0.48	1.05-3.1	9.525	3.97	4.4	1.2	○
	DCMT 070202-F2K	0.06-0.20	0.50-2.0	6.35	2.38	2.8	0.2	●
	DCMT 070204-F2K	0.08-0.15	0.50-2.0	6.35	2.38	2.8	0.4	●
	DCMT 11T302-F2K	0.06-0.15	0.50-2.0	9.525	3.97	4.4	0.2	●
	DCMT 11T304-F2K	0.08-0.20	0.50-2.0	9.525	3.97	4.4	0.4	●
	DCMT 11T308-F2K	0.10-0.25	0.50-2.0	9.525	3.97	4.4	0.8	●
	DCMT 11T304-M2T	0.10-0.25	0.50-3.0	9.525	3.97	4.4	0.4	●
	DCMT 11T308-M2T	0.10-0.25	0.50-3.0	9.525	3.97	4.4	0.8	●

Remark: ● Stocked ○ Non-stocked (Please check the stock)


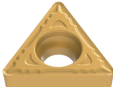
Stock List---Positive Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	DCMT 070204E-KC2	0.06-0.18	0.40-2.3	6.35	2.38	2.8	0.4	○
	DCMT 070208E-KC2	0.12-0.36	0.80-2.3	6.35	2.38	2.8	0.8	○
	DCMT 11T304E-KC2	0.06-0.18	0.40-3.5	9.525	3.97	4.4	0.4	●
	DCMT 11T308E-KC2	0.12-0.36	0.80-3.5	9.525	3.97	4.4	0.8	○
	SCMT 09T304E-PB1	0.04-0.14	0.30-2.4	9.525	3.97	4.4	0.4	●
	SCMT 09T308E-PB1	0.09-0.28	0.60-2.4	9.525	3.97	4.4	0.8	●
	SCMT 09T304E-PC2	0.05-0.16	0.35-2.9	9.525	3.97	4.4	0.4	●
	SCMT 09T308E-PC2	0.10-0.32	0.70-2.9	9.525	3.97	4.4	0.8	●
	SCMT 120404E-PC2	0.05-0.16	0.35-3.8	12.7	4.76	5.5	0.4	●
	SCMT 120408E-PC2	0.10-0.32	0.70-3.8	12.7	4.76	5.5	0.8	●
	SCMT 09T304-M2T	0.10-0.25	0.70-3.5	9.525	3.97	4.4	0.4	●
	SCMT 09T308-M2T	0.10-0.25	0.70-3.5	9.525	3.97	4.4	0.8	●
	SCMT 09T304E-KC2	0.06-0.18	0.40-3.1	9.525	3.97	4.4	0.4	○
	SCMT 09T308E-KC2	0.12-0.36	0.80-3.1	9.525	3.97	4.4	0.8	○
	SCMT 120404E-KC2	0.06-0.18	0.40-4.2	12.7	4.76	5.5	0.4	○
	SCMT 120408E-KC2	0.12-0.36	0.80-4.2	12.7	4.76	5.5	0.8	○
	TPMT 110308E-PA1	0.05-0.30	0.10-1.0	6.35	3.18	3.4	0.8	●
	TCMT 110204-F1T	0.07-0.20	0.40-1.5	6.35	11.00	2.38	0.4	●
	TPMT 110304-F1T	0.07-0.20	0.40-1.5	6.35	11.00	3.18	0.4	●
	TCMT 16T304-F1T	0.10-0.25	0.60-1.5	9.525	16.50	3.97	0.4	●

Remark: ● Stocked ○ Non-stocked (Please check the stock)



◆ Stock List---Positive Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	TCMT 090204E-PB1	0.04-0.14	0.30-1.9	5.56	2.38	2.5	0.4	●
	TCMT 110202E-PB1	0.02-0.07	0.15-2.2	6.35	2.38	2.8	0.2	●
	TCMT 110204E-PB1	0.04-0.14	0.30-2.2	6.35	2.38	2.8	0.4	●
	TCMT 110208E-PB1	0.09-0.28	0.60-2.2	6.35	2.38	2.8	0.8	●
	TCMT 110302E-PB1	0.02-0.07	0.15-2.2	6.35	3.18	3.4	0.2	●
	TCMT 16T304E-PB1	0.04-0.14	0.30-3.3	9.525	3.97	4.4	0.4	●
	TCMT 16T308E-PB1	0.09-0.28	0.60-3.3	9.525	3.97	4.4	0.8	●
	TPMT 090202E-PB1	0.02-0.07	0.15-1.9	5.56	2.38	2.5	0.2	●
	TPMT 090204E-PB1	0.04-0.14	0.30-1.9	5.56	2.38	2.5	0.4	●
	TPMT 090208E-PB1	0.09-0.28	0.60-1.9	5.56	2.38	2.5	0.8	●
	TPMT 110302E-PB1	0.02-0.07	0.15-2.2	6.35	3.18	3.4	0.2	●
	TPMT 110304E-PB1	0.04-0.14	0.30-2.2	6.35	3.18	3.4	0.4	●
	TPMT 110308E-PB1	0.09-0.28	0.60-2.2	6.35	3.18	3.4	0.8	●
	TPMT 160304E-PB1	0.04-0.14	0.30-3.3	9.525	3.18	4.4	0.4	●
	TPMT 160308E-PB1	0.09-0.28	0.60-3.3	9.525	3.18	4.4	0.8	●
	TCMT 090204E-PC2	0.05-0.16	0.35-2.6	5.56	2.38	2.5	0.4	●
	TCMT 090208E-PC2	0.10-0.32	0.70-2.6	5.56	2.38	2.5	0.8	●
	TCMT 110204E-PC2	0.05-0.16	0.35-3.0	6.35	2.38	2.8	0.4	●
	TCMT 110208E-PC2	0.10-0.32	0.70-3.0	6.35	2.38	2.8	0.8	●
	TCMT 110302E-PC2	0.18-3.00	0.03-0.08	6.35	3.18	3.4	0.2	●
	TCMT 16T304E-PC2	0.05-0.16	0.35-4.5	9.525	3.97	4.4	0.4	●
	TCMT 16T308E-PC2	0.10-0.32	0.70-4.5	9.525	3.97	4.4	0.8	●
	TPMT 090204E-PC2	0.04-0.14	0.30-1.9	5.56	2.38	2.5	0.4	●
	TPMT 090208E-PC2	0.09-0.28	0.60-1.9	5.56	2.38	2.5	0.8	●
	TPMT 110304E-PC2	0.04-0.14	0.30-2.2	6.35	3.18	3.4	0.4	●
	TPMT 110308E-PC2	0.09-0.28	0.60-2.2	6.35	3.18	3.4	0.8	●
	TPMT 160304E-PC2	0.10-0.25	0.60-2.0	9.525	3.18	4.4	0.4	●
	TPMT 160308E-PC2	0.10-0.25	0.60-2.0	9.525	3.18	4.4	0.8	●

Remark: ● Stocked ○ Non-stocked (Please check the stock)




◆ Stock List---Positive Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	TCMT 110204-F2K	0.08-0.20	0.50-2.0	6.35	2.38	2.8	0.4	●
	TCMT 110208-F2K	0.10-0.25	0.50-2.0	6.35	2.38	2.8	0.8	●
	TPMT 110304-F2K	0.08-0.20	0.50-2.0	6.35	3.18	3.4	0.4	●
	TCMT 110204-M2T	0.10-0.25	0.60-2.0	6.35	2.38	2.8	0.4	●
	TCMT 110208-M2T	0.10-0.25	0.60-2.0	6.35	2.38	2.8	0.8	●
	TCMT 110302-M2T	0.06-0.18	0.60-2.0	6.35	3.18	3.4	0.2	●
	TCMT 16T304-M2T	0.06-0.18	0.40-2.9	9.525	3.97	4.4	0.4	●
	TCMT 16T308-M2T	0.12-0.36	0.80-2.9	9.525	3.97	4.4	0.8	●
	TCMT 090204E-KC2	0.06-0.18	0.40-3.3	6.35	2.38	2.5	0.4	○
	TCMT 090208E-KC2	0.12-0.36	0.80-3.3	6.35	2.38	2.5	0.8	○
	TCMT 110204E-KC2	0.06-0.18	0.40-4.9	9.525	2.38	2.8	0.4	○
	TCMT 110208E-KC2	0.12-0.36	0.80-4.9	9.525	2.38	2.8	0.8	○
	TCMT 110302E-KC2	0.20-3.30	0.06-0.18	6.35	3.18	3.4	0.2	○
	TCMT 16T304E-KC2	0.06-0.18	0.40-4.9	9.525	3.97	4.4	0.4	○
	TCMT 16T308E-KC2	0.12-0.36	0.80-4.9	9.525	3.97	4.4	0.8	○
	VBMT 110302E-PA1	0.04-0.25	0.10-1.0	6.37	3.18	2.8	0.2	●
	VBMT 160404E-PA1	0.10-0.32	0.70-2.6	9.525	4.76	4.4	0.4	●
	VBMT 160408E-PA1	0.05-0.16	0.35-3.0	9.525	4.76	4.4	0.8	○
	VBMT 110302E-PB1	0.10-0.32	0.70-3.0	6.35	3.18	2.8	0.8	●
	VBMT 110304E-PB1	0.04-0.14	0.03-1.4	6.35	3.18	2.8	0.4	●
	VBMT 110308E-PB1	0.09-0.28	0.60-1.4	6.35	3.18	2.8	0.8	●
	VBMT 160404E-PB1	0.04-0.14	0.30-2.1	9.525	4.76	4.4	0.4	●
	VBMT 160408E-PB1	0.09-0.28	0.60-2.1	9.525	4.76	4.4	0.8	●
	VBMT 110304E-PC2	0.05-0.16	0.35-2.1	6.35	3.18	2.8	0.4	●
	VBMT 110308E-PC2	0.04-0.14	0.30-1.4	6.35	3.18	2.8	0.8	●
	VBMT 160404E-PC2	0.04-0.14	0.30-1.4	9.525	4.76	4.4	0.4	●
	VBMT 160408E-PC2	0.09-0.28	0.60-1.4	9.525	4.76	4.4	0.8	●

Remark: ● Stocked ○ Non-stocked (Please check the stock)



◆ Stock List---Positive Inserts

Insert	Product Code	Recommended Parameters		Size(mm)				Grade
		f	ap	d	s	d1	r	AT210A
	VBMT 110304-F2K	0.08-0.20	0.50-2.0	6.35	3.18	2.8	0.4	●
	VBMT 160404-F2K	0.08-0.20	0.50-2.0	9.525	4.76	4.4	0.4	●
	VBMT 160408-F2K	0.10-0.25	0.50-2.0	9.525	4.76	4.4	0.8	●
	VBMT 160404E-KC2	0.04-0.14	0.30-2.1	9.525	4.76	4.4	0.4	○
	VBMT 160408E-KC2	0.09-0.28	0.60-2.1	9.525	4.76	4.4	0.8	○
	VBMT 160412E-KC2	0.05-0.16	0.35-2.1	6.35	4.76	4.4	1.2	○
	VBMT 110302E-BS	0.10-0.32	0.70-2.1	6.35	3.18	2.8	0.2	●
	VBMT 110304E-BS	0.05-0.16	0.35-3.1	9.525	3.18	2.8	0.4	●
	VBMT 110308E-BS	0.10-0.32	0.70-3.1	9.525	3.18	2.8	0.8	●
	VBMT 160402E-BS	0.04-0.14	0.30-1.5	9.525	4.76	4.4	0.2	○
	VBMT 160404E-BS	0.06-0.18	0.40-3.3	9.525	4.76	4.4	0.4	●
	VBMT 160408E-BS	0.12-0.36	0.80-3.3	9.525	4.76	4.4	0.8	●
	VBMT 160412E-BS	0.18-0.54	1.20-3.3	9.525	4.76	4.4	1.2	○

Remark: ● Stocked ○ Non-stocked (Please check the stock)