

Turning Positive from Semi-finishing to Finishing

——PB2 Chipbreaker



Wide depth of cut range ensures excellent chip breaking performance
Delivers smooth cutting performance for external turning and internal boring

NO.109

www.achtecktool.com

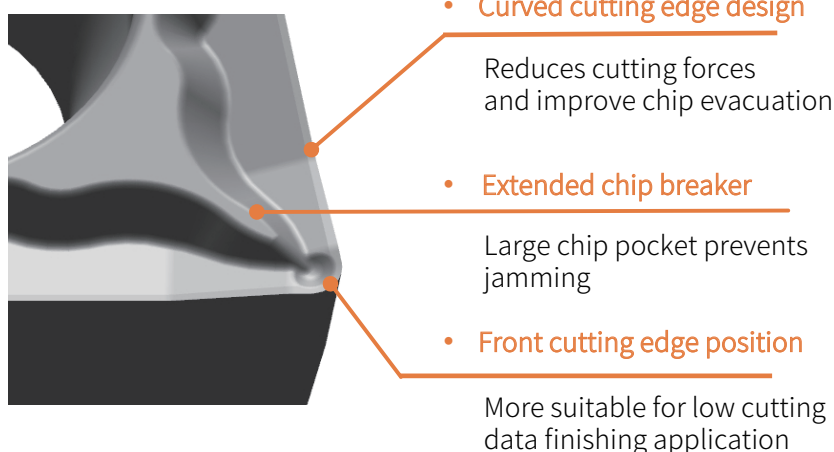
Turning Positive from Semi-finishing to Finishing

PB2 Chipbreaker

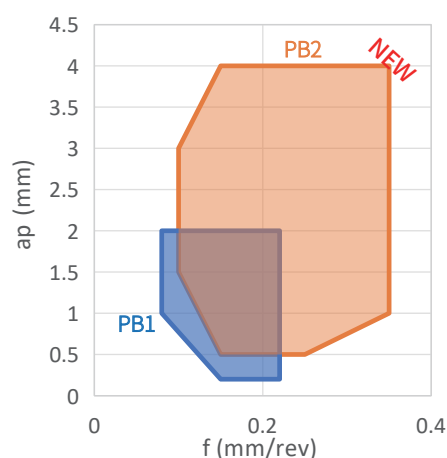


• Gometry features

Curved cutting edge design significantly reduces cutting forces. Slender chip breaker increases contained chip space. Ensures smooth chip evacuation. Deepened groove in nose radius increase chip breaking capability with low cutting data.



Chip Control Range



• Grades

General Purpose Grades

AP200U

P15-P35
M15-M35

Universal turning grade for steels and stainless steels, featuring excellent wear and chipping resistance

Difficult-to-Cut Materials

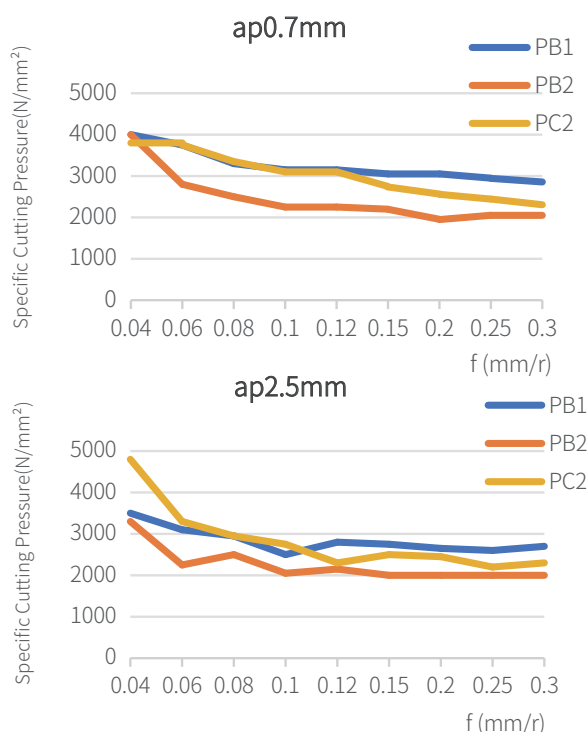
AP010S

S05-S25

Ultra-fine grain substrate with nano-structured coating technology delivers dense microstructure, significantly enhancing wear resistance and anti-adhesion properties

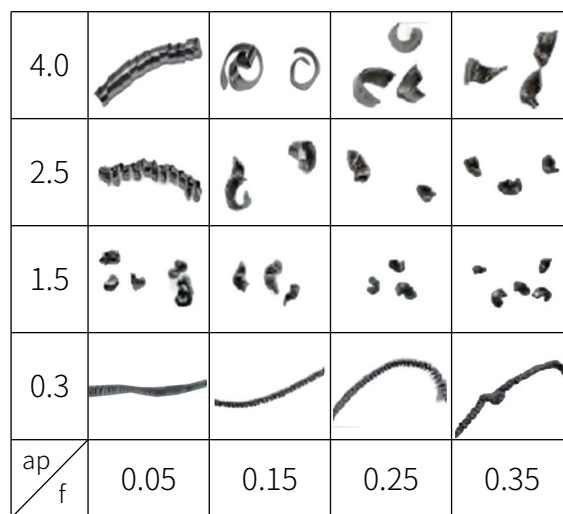
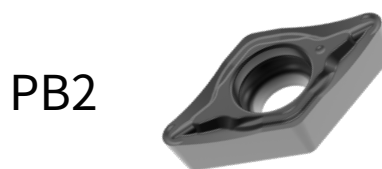
Workpiece Materials	Steel (Carbon/Alloy)					Stainless Steel					High-Temperature Alloys				
Machining Applications	Finishing  Roughing					Finishing  Roughing					Finishing  Roughing				
ISO Classification	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	S01	S10	S20	S30	S40
PB2 Chipbreaker		AP200U					AP200U				AP010S				
Recommended Cutting Speed (Vc)	100-200m/min					70-200m/min					30-60m/min				

Cutting Force Measurement



Test Conditions: DCMT 11T304E, 4340#, Vc=220m/min, Dry Cutting

Chip Breaking Test



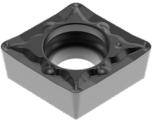
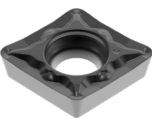
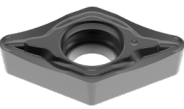
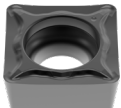
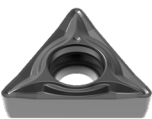
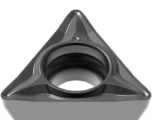
Test Conditions: DCMT 11T304, 4340#, Vc=120m/min

Application Case

Product code	CCMT 09T304E-PB2 AP200U
Machined Parts	
Material	SAE8620H-SH2(steel)
Cutting Speed	90m/min
Depth of Cut(ap)	1.2mm
Feed Rate(f)	0.36mm/r
Coolant	Emulsion Coolant
Result	PB2 ensures stable machining performance with 130% tool life improvement

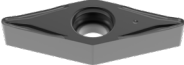
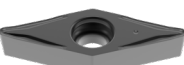
Product code	VBMT 160404E-PB2 AP010S
Machined Parts	
Material	Heat Resistant Super Alloy
Cutting Speed	41m/min
Depth of Cut(ap)	0.8mm
Feed Rate(f)	0.15mm/r
Coolant	Emulsion Coolant
Result	PB2 achieves same tool life, meanwhile offering better cost performance

Product List

Illustrate	Product code	RE	Cutting Data Recommendation		Grades	
			f(mm/rev)	ap(mm)	AP200U	AP010S
	CCMT 060202E-PB2	0.2	0.10-0.15	0.2-2.0	●	
	060204E-PB2	0.4	0.10-0.15	0.4-2.0	●	
	060208E-PB2	0.8	0.10-0.15	0.8-2.0	●	
	09T302E-PB2	0.2	0.10-0.20	0.2-2.5	●	
	09T304E-PB2	0.4	0.10-0.20	0.4-2.5	●	
	09T308E-PB2	0.8	0.10-0.20	0.8-2.5	●	
	120404E-PB2	0.4	0.10-0.40	0.4-3.5	○	
	120408E-PB2	0.8	0.10-0.40	0.8-3.5	○	
	CPMT 080202E-PB2	0.2	0.10-0.25	0.2-2.0	○	
	080204E-PB2	0.4	0.10-0.25	0.4-2.0	○	
	080208E-PB2	0.8	0.10-0.25	0.8-2.0	○	
	090302E-PB2	0.2	0.10-0.30	0.2-2.5	○	
	090304E-PB2	0.4	0.10-0.30	0.4-2.5	○	
	090308E-PB2	0.8	0.10-0.30	0.8-2.5	○	
	DCMT 070202E-PB2	0.2	0.10-0.15	0.2-2.0	○	
	070204E-PB2	0.4	0.10-0.15	0.4-2.0	●	
	070208E-PB2	0.8	0.10-0.15	0.8-2.0	○	
	11T302E-PB2	0.2	0.10-0.25	0.2-3.0	●	●
	11T304E-PB2	0.4	0.10-0.25	0.4-3.0	●	●
	11T308E-PB2	0.8	0.10-0.25	0.8-3.0	●	●
	SCMT 09T304E-PB2	0.4	0.10-0.30	0.4-2.5	○	
	09T308E-PB2	0.8	0.10-0.30	0.8-2.5	●	
	120404E-PB2	0.4	0.10-0.40	0.4-3.5	○	
	120408E-PB2	0.8	0.10-0.40	0.8-3.5	○	
	TCMT 090202E-PB2	0.2	0.10-0.30	0.2-2.5	○	
	090204E-PB2	0.4	0.10-0.30	0.4-2.5	○	
	090208E-PB2	0.8	0.10-0.30	0.8-2.5	○	
	110202E-PB2	0.2	0.10-0.25	0.2-2.0	○	
	110204E-PB2	0.4	0.10-0.25	0.4-2.0	●	
	110208E-PB2	0.8	0.10-0.25	0.8-2.0	○	
	16T304E-PB2	0.4	0.10-0.30	0.4-3.0	○	
	16T308E-PB2	0.8	0.10-0.30	0.8-3.0	○	
	TPMT 090202E-PB2	0.2	0.10-0.25	0.2-2.5	○	
	090204E-PB2	0.4	0.10-0.25	0.4-2.5	○	
	110302E-PB2	0.2	0.10-0.30	0.2-3.0	○	
	110304E-PB2	0.4	0.10-0.30	0.4-3.0	○	

●-Running stock ○-Rolling stock

Product List

Illustrate	Product code	RE	Cutting Data Recommendation		Grades	
			f(mm/rev)	ap(mm)	AP200U	AP010S
	VBMT 110302E-PB2	0.2	0.10-0.25	0.2-2.5	○	
	110304E-PB2	0.4	0.10-0.25	0.4-3.5	●	
	160402E-PB2	0.2	0.10-0.40	0.2-3.5	●	●
	160404E-PB2	0.4	0.10-0.40	0.4-3.5	●	●
	160408E-PB2	0.8	0.10-0.40	0.8-3.5	●	●
	VCMT 110302E-PB2	0.2	0.10-0.30	0.2-2.5	○	
	110304E-PB2	0.4	0.10-0.30	0.4-2.5	●	
	160402E-PB2	0.2	0.10-0.40	0.2-3.5	●	
	160404E-PB2	0.4	0.10-0.40	0.4-3.5	●	
	160408E-PB2	0.8	0.10-0.40	0.8-3.5	●	

●-Running stock ○-Rolling stock