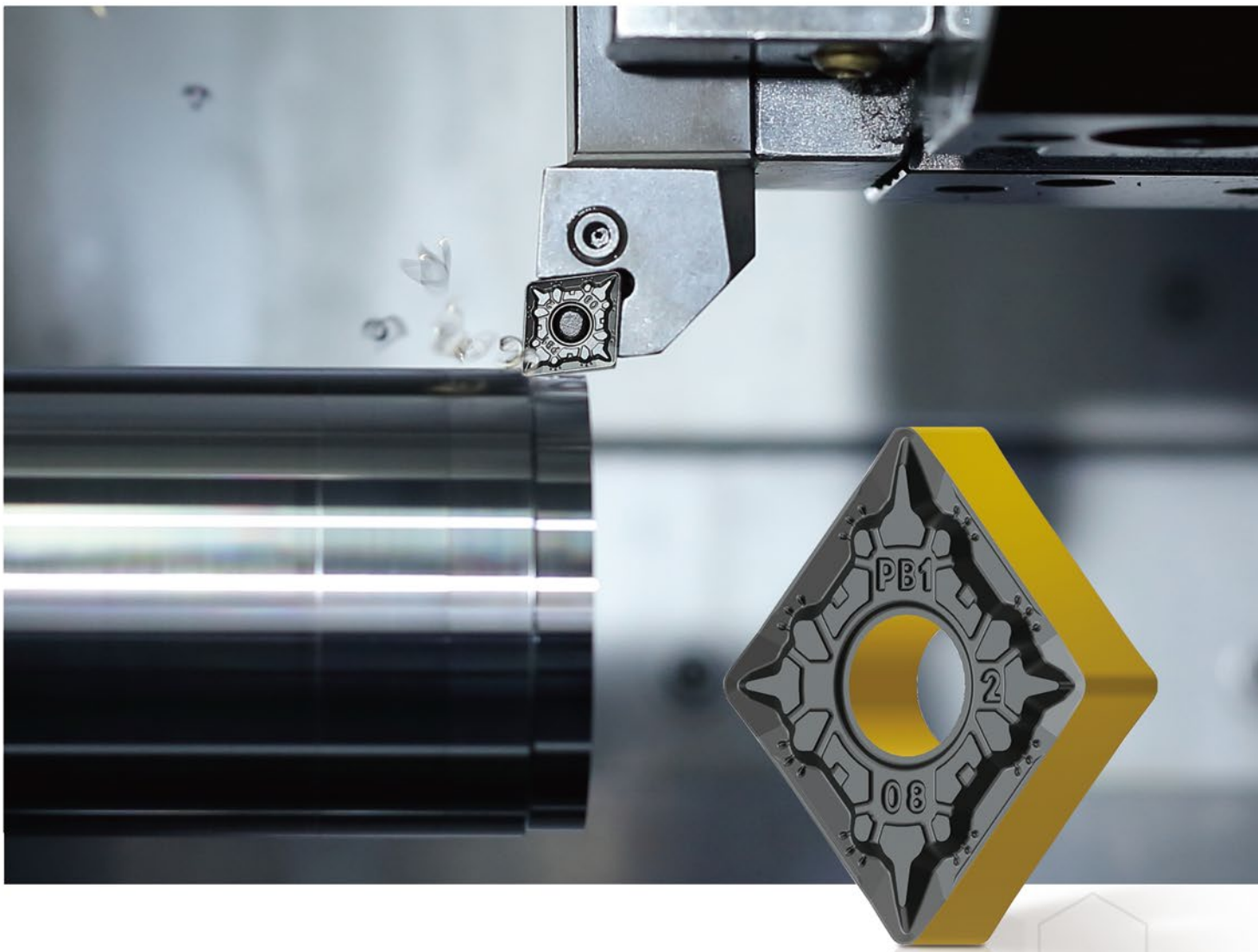


ACHTECK•TURN

New Chip Breaker **PB1**

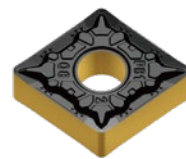
for Steel Machining



www.achtecktool.com

PB1 Finishing- Semi Finishing

Excellent chip breaking and removal under small cutting depth and high feed conditions.



Grade Application

Application Range											
ISO	01	5	10	15	20	25	30	35	40	45	50
P			AC150P								
					AC250P						

Chip Breaker Features

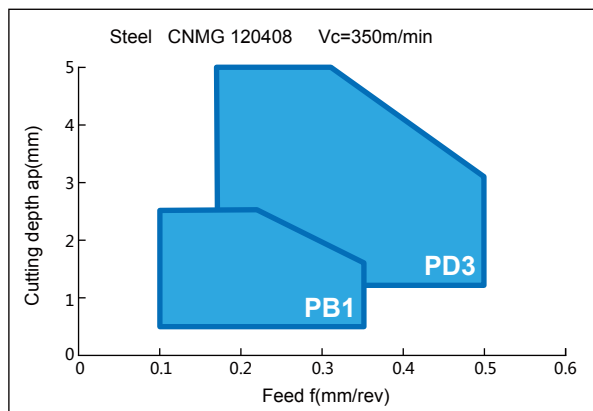
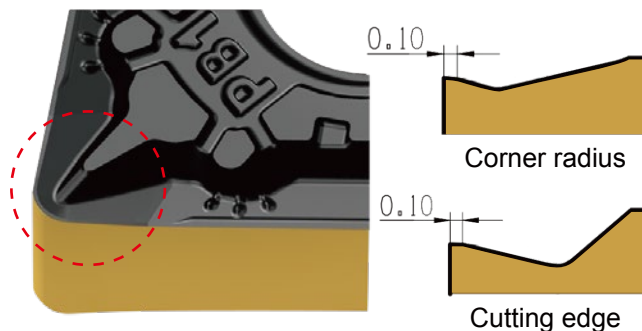
Outstanding machining control is based on tough chip breaker.

Unique chip breaking point design obtains superior chip breaking and removal effect.

By adopting sloping and sharp cutting edge, it ensures machining stability.

By adopting double color coating design, it clearly estimates flank wear.

Recommended grade: AC150P/AC250P



● Machining Case

Work piece: Driving gear

Material: Alloy steel

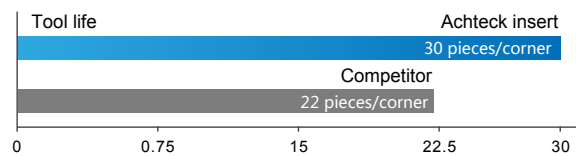
Insert: TNMG 160408E-PB1 AC150P

Other Company: TNMG 160408 A XX P15

Machining Type: External turning, End face turning

Cutting Parameter: $V_c=320\text{m/min}$ $a_p=0.5\text{mm}$
 $f=0.18\text{mm/rev}$

Condition: Dry cutting



Comparison Result: Achteck tool life is 36% higher than competitor



Work piece: Driving gear

Material: Alloy steel

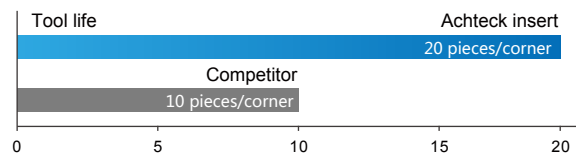
Insert: WNMG 080408E-PB1 AC250P

Other Company: WNMG 080408 A XX P25

Machining Type: End face turning

Cutting Parameter: $V_c=260\text{m/min}$ $a_p=0.5\text{mm}$
 $f=0.16\text{mm/rev}$

Condition: Dry cutting



Comparison Result: Achteck tool life is 100% higher than competitor



Work piece: Gear shaft

Material: Low carbon alloy steel

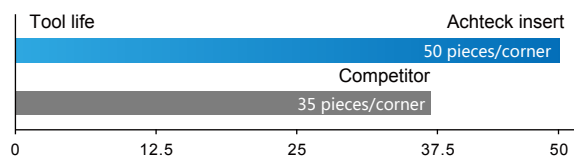
Insert: CNMG 120408E-PB1 AC150P

Other Company: CNMG 120408 A XX P15

Machining Type: External, Internal turning

Cutting Parameter: $V_c=290\text{m/min}$ $a_p=1.0\text{mm}$
 $f=0.20\text{-}0.25\text{mm/rev}$

Condition: Wet cutting



Comparison Result: Achteck tool life is 30% higher than competitor



Work piece: Wheel hub

Material: Medium carbon steel

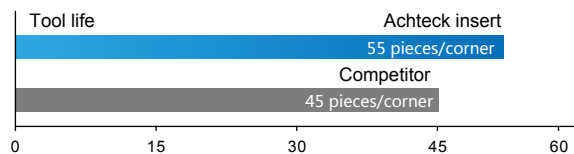
Insert: WNMG 080408E-PB1 AC250P

Other Company: WNMG 080408 A XX P15

Machining Type: External turning, End face turning

Cutting Parameter: $V_c=320\text{m/min}$ $a_p=1.0\text{mm}$
 $f=0.20\text{mm/rev}$

Condition: Dry cutting

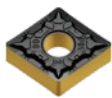
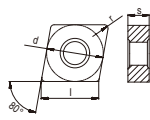
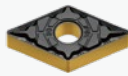
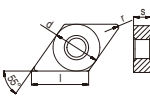
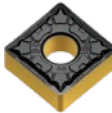
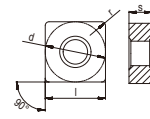
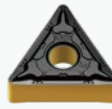
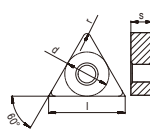
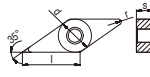
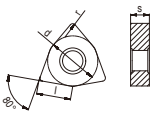


Comparison Result: Achteck tool life is 20% higher than competitor



◆ Insert Stock

Negative insert

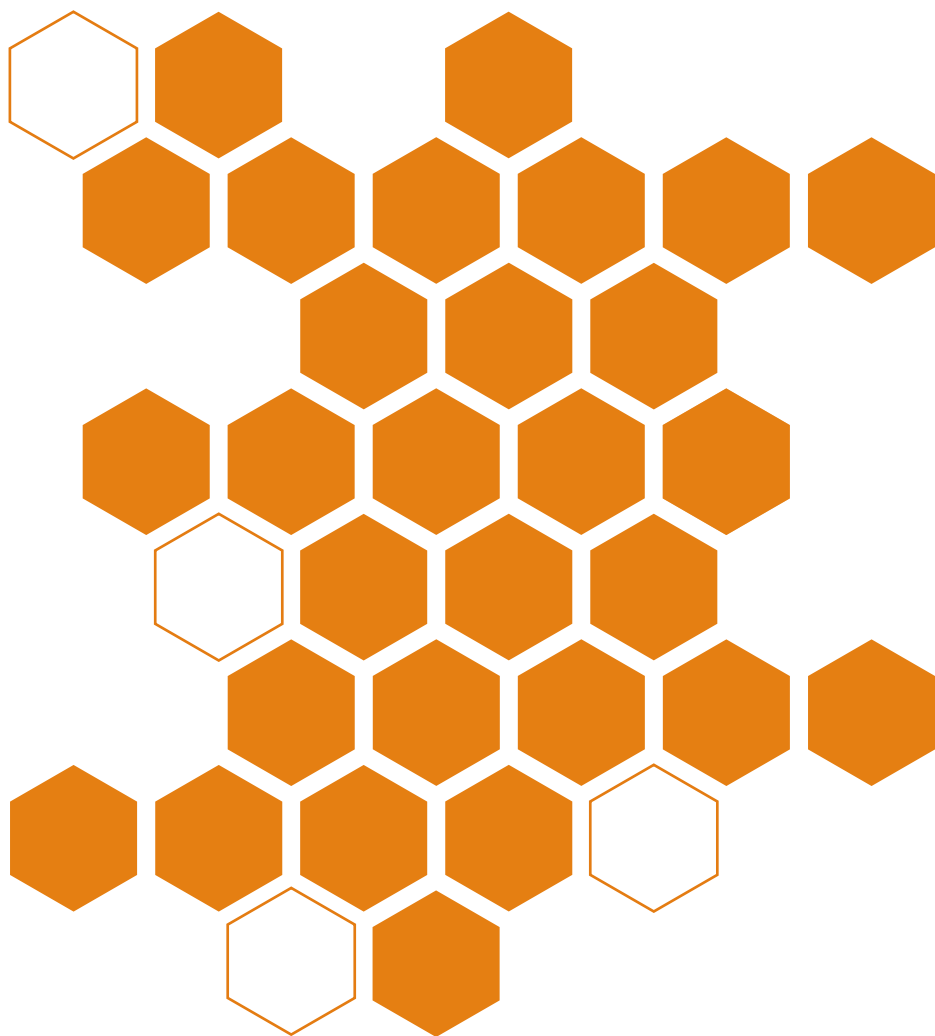
Insert	Item designation	Recommended cutting parameters		Dimension(mm)				Grade (CVD)		Geometry
		Feed (mm/rev)	ap (mm)	d	l	s	r	AC150P	AC250P	
	CNMG 120404E-PB1	0.05-0.15	0.26-3.2	12.7	12.9	4.76	0.4	●	●	
	120408E-PB1	0.10-0.30	0.52-3.2	12.7	12.9	4.76	0.8	●	●	
	120412E-PB1	0.15-0.45	0.78-3.2	12.7	12.9	4.76	1.2	○	○	
	DNMG 110404E-PB1	0.05-0.15	0.26-2.3	9.525	11.62	4.76	0.4	○	●	
	150404E-PB1	0.05-0.15	0.26-3.1	12.7	15.5	4.76	0.4	●	●	
	150408E-PB1	0.10-0.30	0.52-3.1	12.7	15.5	4.76	0.8	●	●	
	150412E-PB1	0.15-0.45	0.78-3.1	12.7	15.5	4.76	1.2	○	○	
	150604E-PB1	0.05-0.15	0.26-3.1	12.7	15.5	6.35	0.4	●	●	
	150608E-PB1	0.10-0.30	0.52-3.1	12.7	15.5	6.35	0.8	●	●	
	150612E-PB1	0.15-0.45	0.78-3.1	12.7	15.5	4.76	1.2	○	○	
	SNMG 120404E-PB1	0.05-0.15	0.26-3.2	12.7	12.7	4.76	0.4	●	●	
	120408E-PB1	0.10-0.30	0.52-3.2	12.7	12.7	4.76	0.8	●	●	
	120412E-PB1	0.15-0.45	0.78-3.2	12.7	12.7	4.76	1.2	○	○	
	TNMG 160404E-PB1	0.05-0.15	0.26-3.1	9.525	16.5	4.76	0.4	●	●	
	160408E-PB1	0.10-0.30	0.52-3.1	9.525	16.5	4.76	0.8	●	●	
	160412E-PB1	0.15-0.45	0.78-3.1	9.525	16.5	4.76	1.2	●	●	
	VNMG 160404E-PB1	0.05-0.15	0.26-2.1	9.525	16.5	4.76	0.4	●	●	
	160408E-PB1	0.10-0.30	0.52-2.1	9.525	16.5	4.76	0.8	●	●	
	160412E-PB1	0.15-0.45	0.78-2.1	9.525	16.5	4.76	1.2	○	○	
	WNMG 080404E-PB1	0.05-0.15	0.26-2.2	12.7	8.7	4.76	0.4	●	●	
	080408E-PB1	0.10-0.30	0.52-2.2	12.7	8.7	4.76	0.8	●	●	
	080412E-PB1	0.15-0.45	0.78-2.2	12.7	8.7	4.76	1.2	●	●	

Remark: ● represent for standard stock
○ represent for Make-To-Order

Recommended Cutting Parameters

Cutting Materials				Achteck turning insert grade application range					
ISO	Material group	Tensile strength (N/mm ²)	Hardness (HB)	AC150P			AC250P		
				P10-25			P20-35		
				CVD			CVD		
				f(mm/rev)			f(mm/rev)		
				0.08	0.2	0.35	0.08	0.2	0.35
P	Non-alloy steels	<600	<180	485	378	270	380	260	160
		<950	<280	335	243	150	240	162	100
	Alloyed steels	700-950	200-280	315	168	120	230	155	90
		950-1200	280-355	285	150	90	180	137	75
		1200-1400	355-415	235	110	70	135	92	55

* The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, work piece clamping and coolants. (f=mm/rpm needs to adjust according to corner radius)



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