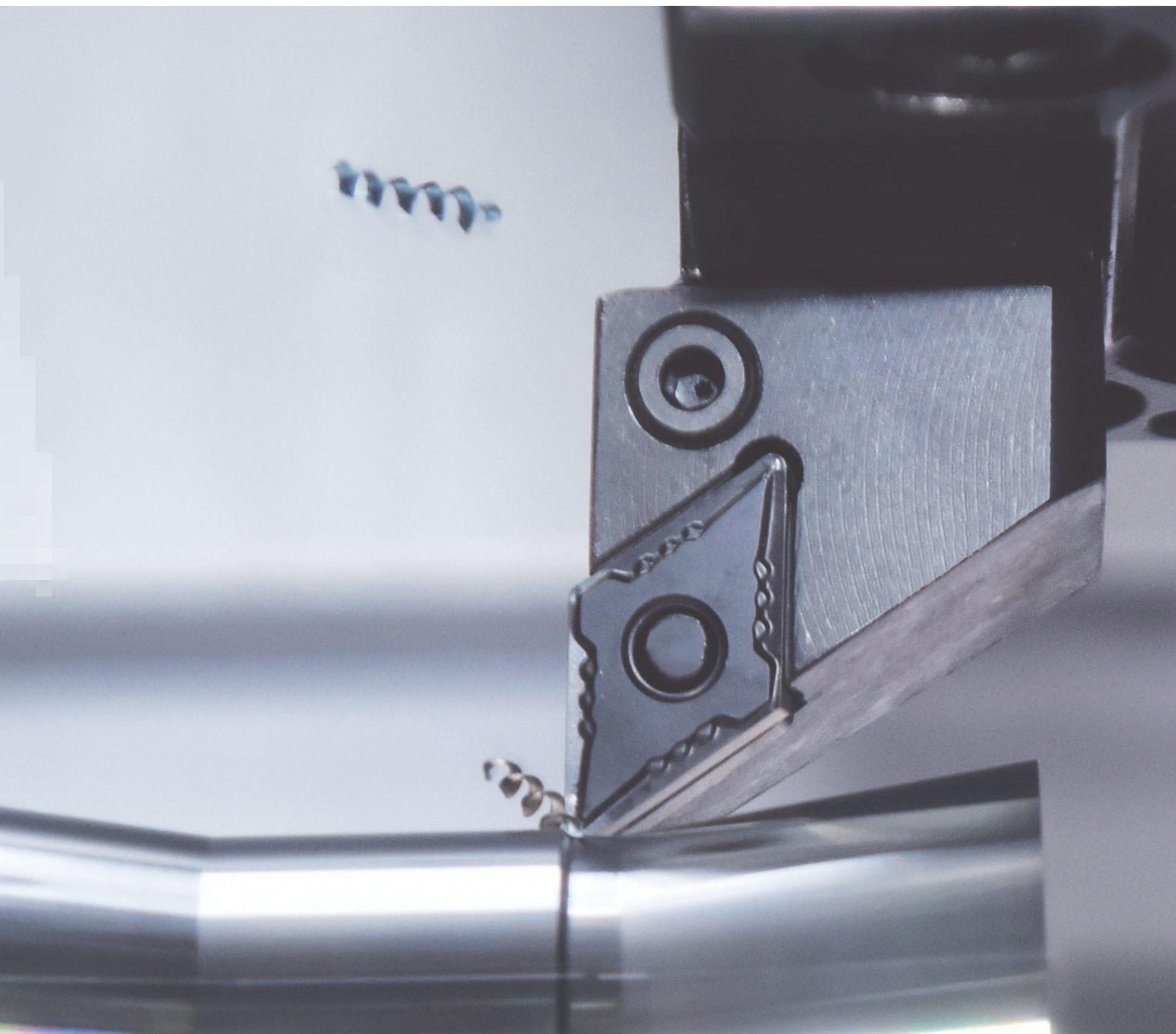


**NEW  
PRODUCT!**

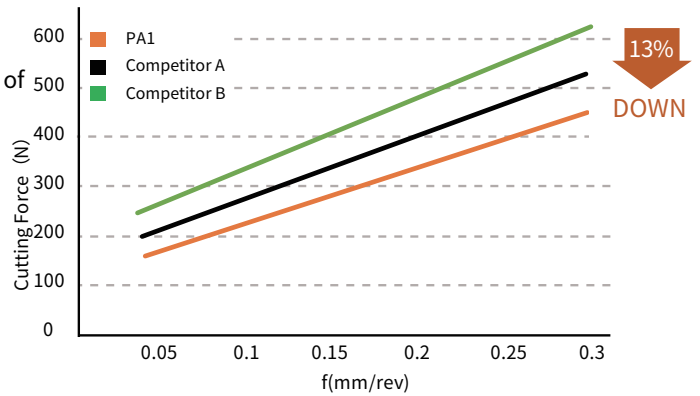
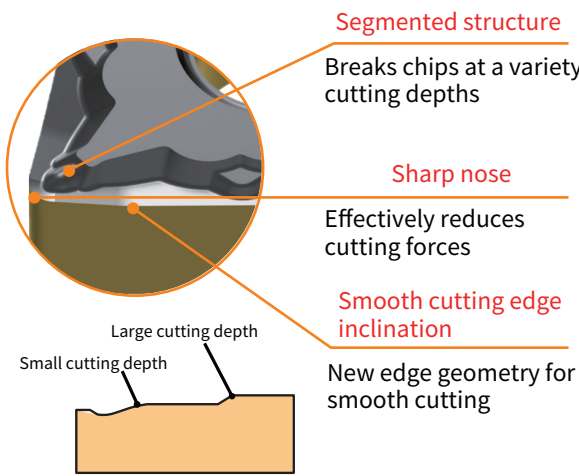
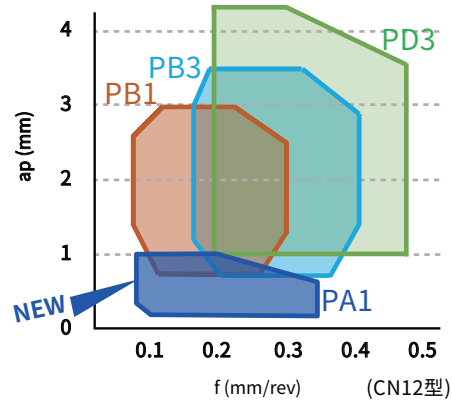
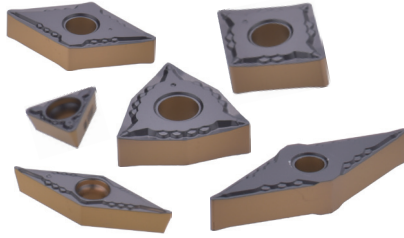
**Finishing geometry for steel  
finish turning**

**PA1**



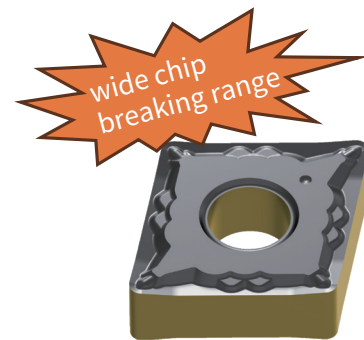
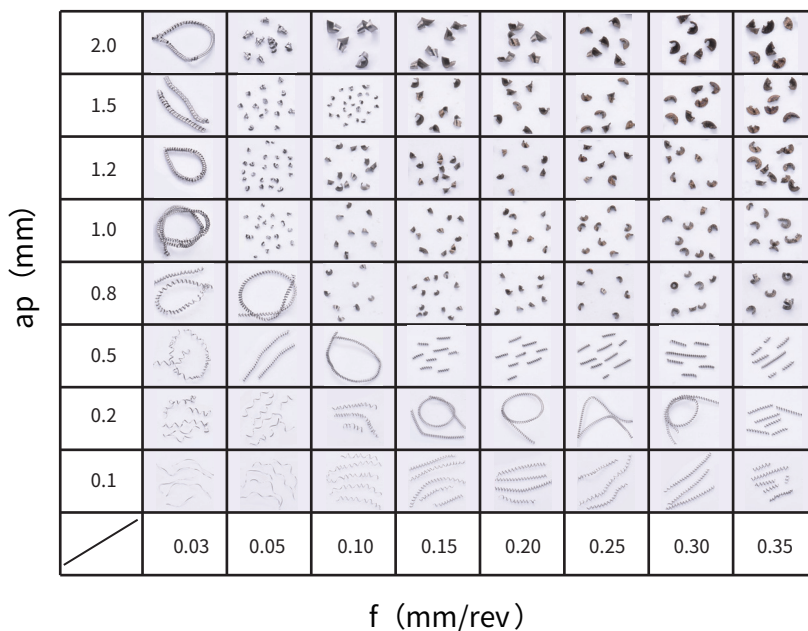
## Technical features

Smooth chip removal at lower cutting depths



Insert: CNMG 120404  
 Material: 40CrNiMo  
 Parameters:  $V_c=200$ m/min  $f=0.05\sim0.3$ mm/rev  $a_p=1.0$ mm WET

## Chip breaking diagram



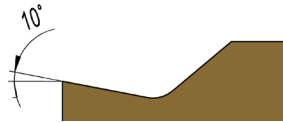
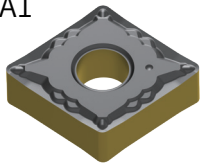
Insert: CNMG 120404  
 Material: 40CrNiMo  
 Parameters:  $V_c=200$ m/min WET

Wide application range, smooth chip removal with increased feed rates



Comparison

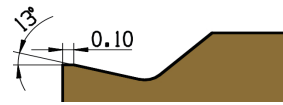
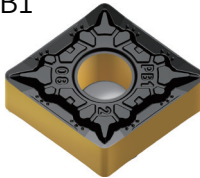
PA1



Finishing

Segmented structure design allows smooth cutting action at variety of cutting depths. New cutting geometry effectively reduces cutting forces.

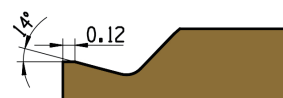
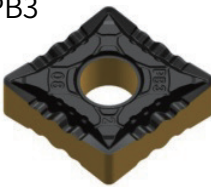
PB1



Finishing

Light cutting combined with low cutting forces makes this useful in turning long shafts, thin walled parts and unstable parts.

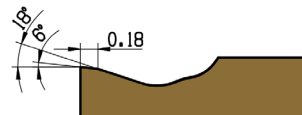
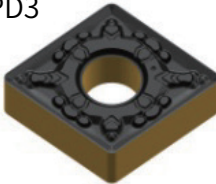
PB3



Semi-finishing

The positive rake angle combined with a small land guarantees edge strength and sharpness, with lower cutting forces. The wavy side edge design has good chip breaking results in outcopying turning on the shoulder, and in profile turning at different cutting depths.

PD3



Medium

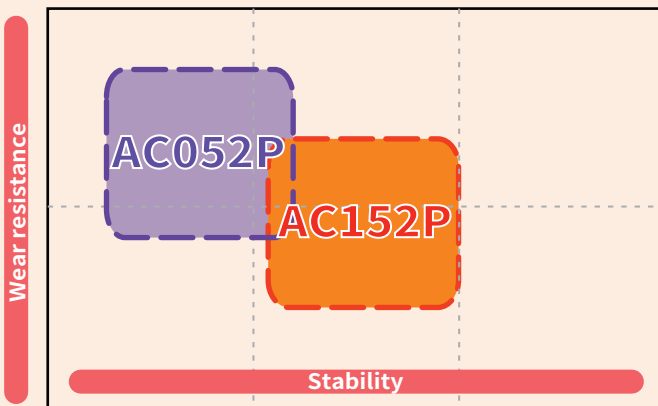
Good chip control and crater wear resistance, good performance in chip breaking with large feed and cutting depth, double rake angle design offers the sharpness and low cutting forces at the cutting edge.

Features

Grades

ACHTECK

Grades



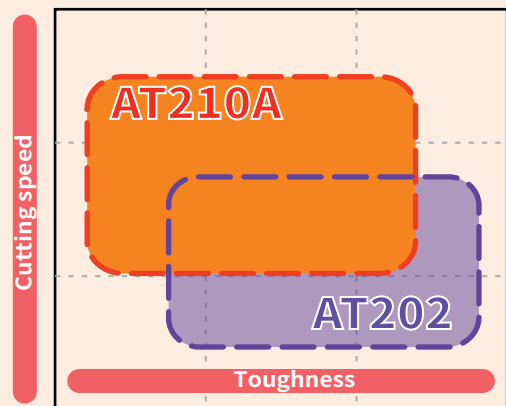
**AC052P**

Grade for steel turning at high cutting speed, in continuous machining.

**AC152P**

Grade for steel turning in continuous machining and light interrupted machining.

Grades



**AT202**


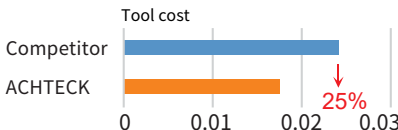
Universal grade for steel turning in continuous machining and light interrupted machining.


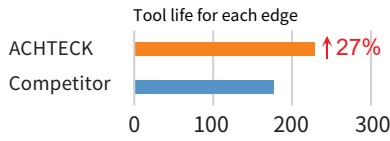
**AT210A**


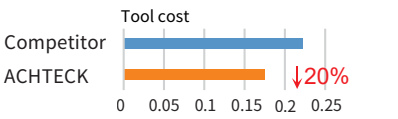
Grade for steel turning in high efficiency and high accuracy continuous cut machining.



• **Success stories**

Insert	WNMG080408E-PA1 AC052P
Workpiece	Main reducer gear 
Material	20MnCr
Application	End face finish turning
Cutting Speed	366m/min
f(mm/rev)	0.22-0.26mm/rev
ap(mm)	0.5mm
Coolant	Emulsion
Result	 <p>Under the same cutting condition, the tool cost is decreased by <b>25%</b>.</p>

Insert	VNMG 160408E-PA1 AC052P
Workpiece	Motor axis 
Material	42CrMo
Application	External finish turning
Cutting Speed	240m/min
f(mm/rev)	0.1mm/rev
ap(mm)	0.3-1mm
Coolant	Emulsion
Result	 <p>Under the same cutting condition, the tool life of each edge is increased by <b>27%</b>.</p>

Insert	DNMG 150608E-PA1 AC052
Workpiece	Flange 
Material	45#Steel
Application	End face finish turning
Cutting Speed	240m/min
f(mm/rev)	0.2mm/rev
ap(mm)	1.2mm
Coolant	Emulsion
Result	 <p>Under the same cutting condition, the tool cost is decreased by <b>20%</b>.</p>

Insert	VNMG 160408E-PA1 AT210A
Workpiece	Roller 
Material	GCr15
Application	External Finish turning
Cutting Speed	170m/min
f(mm/rev)	0.1mm/rev
ap(mm)	0.4mm
Coolant	Oil
Result	 <p>Under the same cutting condition, the tool life of each edge is increased by <b>17%</b>.</p>



◆ **Product List**

● Stocked or stocked in the future

NO.	Insert	Product Code	Parameter		Size (mm)				Grade			
			f	ap	d	s	d1	r	AC052P	AC152P	AT202	AT210A
			(mm/rev)	(mm)	(mm)	(mm)	(mm)	(mm)				
1		CNMG 120402E-PA1	0.04-0.25	0.02-1.5	12.7	4.76	5.16	0.2	●	●	●	●
2		CNMG 120404E-PA1	0.04-0.28	0.02-1.5	12.7	4.76	5.16	0.4	●	●	●	●
3		CNMG 120408E-PA1	0.05-0.35	0.02-1.5	12.7	4.76	5.16	0.8	●	●	●	●
4		CNMG 120412E-PA1	0.05-0.42	0.02-1.5	12.7	4.76	5.16	1.2		●	●	●
5		DNMG 150402E-PA1	0.04-0.25	0.20-1.5	12.7	4.76	5.16	0.2		●	●	●
6		DNMG 150404E-PA1	0.04-0.28	0.20-1.5	12.7	4.76	5.16	0.4	●	●	●	●
7		DNMG 150408E-PA1	0.05-0.35	0.20-1.5	12.7	4.76	5.16	0.8	●	●	●	●
8		DNMG 150412E-PA1	0.05-0.42	0.20-1.5	12.7	4.76	5.16	1.2	●	●	●	●
9		DNMG 150602E-PA1	0.04-0.25	0.20-1.5	12.7	6.35	5.16	0.2		●	●	●
10		DNMG 150604E-PA1	0.04-0.28	0.20-1.5	12.7	6.35	5.16	0.4	●	●	●	●
11		DNMG 150608E-PA1	0.05-0.35	0.20-1.5	12.7	6.35	5.16	0.8	●	●	●	●
12		DNMG 150612E-PA1	0.05-0.42	0.20-1.5	12.7	6.35	5.16	1.2			●	●
13		TNMG 160402E-PA1	0.04-0.25	0.20-1.5	9.525	4.76	3.81	0.2	●	●	●	●
14		TNMG 160404E-PA1	0.04-0.28	0.20-1.5	9.525	4.76	3.81	0.4	●	●	●	●
15		TNMG 160408E-PA1	0.05-0.35	0.20-1.5	9.525	4.76	3.81	0.8	●	●	●	●
16		TNMG 160412E-PA1	0.05-0.42	0.20-1.5	9.525	4.76	3.81	1.2		●	●	●
17		VNMG 160402E-PA1	0.04-0.25	0.20-1.5	9.525	4.76	3.81	0.2	●	●	●	●
18		VNMG 160404E-PA1	0.04-0.28	0.20-1.5	9.525	4.76	3.81	0.4	●	●	●	●
19		VNMG 160408E-PA1	0.05-0.35	0.20-1.5	9.525	4.76	3.81	0.8	●	●	●	●
20		VNMG 160412E-PA1	0.05-0.42	0.20-1.5	9.525	4.76	3.81	1.2			●	●
21		WNMG 080402E-PA1	0.04-0.25	0.20-1.5	12.7	4.76	5.16	0.2	●	●	●	●
22		WNMG 080404E-PA1	0.04-0.28	0.20-1.5	12.7	4.76	5.16	0.4	●	●	●	●
23		WNMG 080408E-PA1	0.05-0.35	0.20-1.5	12.7	4.76	5.16	0.8	●	●	●	●
24		WNMG 080412E-PA1	0.05-0.42	0.20-1.5	12.7	4.76	5.16	1.2		●	●	●
25		CCMT 060202E-PA1	0.04-0.25	0.10-0.8	6.35	2.38	2.8	0.2	●	●	●	●
26		CCMT 09T308E-PA1	0.05-0.30	0.10-0.8	9.525	3.97	4.4	0.8	●	●	●	●
27		DCMT 11T302E-PA1	0.04-0.25	0.10-1.0	9.525	3.97	4.4	0.2	●	●	●	●
28		DCMT 11T304E-PA1	0.04-0.25	0.10-1.0	9.525	3.97	4.4	0.4	●	●	●	●
29		DCMT 11T308E-PA1	0.05-0.30	0.10-1.0	9.525	3.97	4.4	0.8	●	●	●	●
30		TPMT 110308E-PA1	0.05-0.30	0.10-1.0	6.35	3.18	3.4	0.8		●	●	●
31		VBMT 110302E-PA1	0.04-0.25	0.10-1.0	6.37	3.18	2.8	0.2	●	●	●	●
32		VBMT 160404E-PA1	0.10-0.32	0.70-2.6	9.525	4.76	4.4	0.4	●	●	●	●
33		VBMT 160408E-PA1	0.05-0.16	0.35-3.0	9.525	4.76	4.4	0.8	●	●	●	●