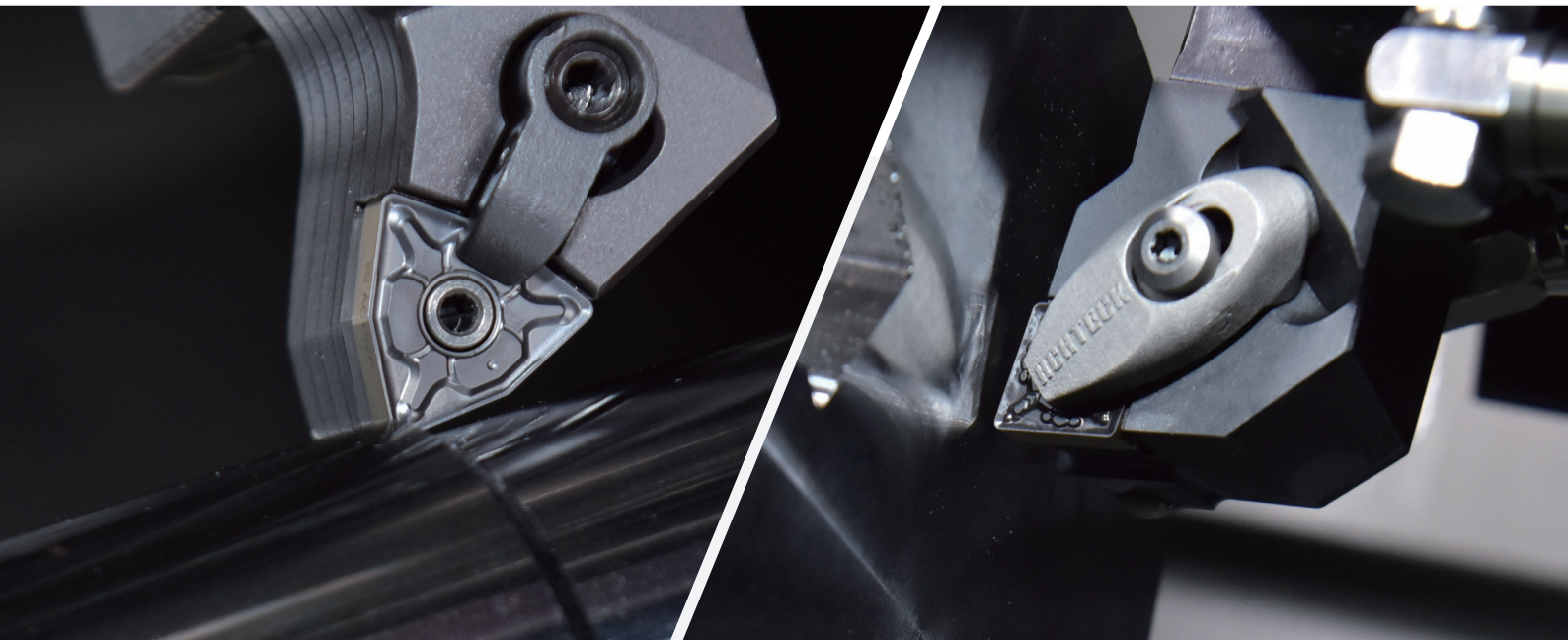




**ACHTECK**  
澳克泰工具

2025.12

# Steel General Machining CVD Coated Grade——AC202P



New Generation CVD Coating, Wide Range Of Stable Machining Applications



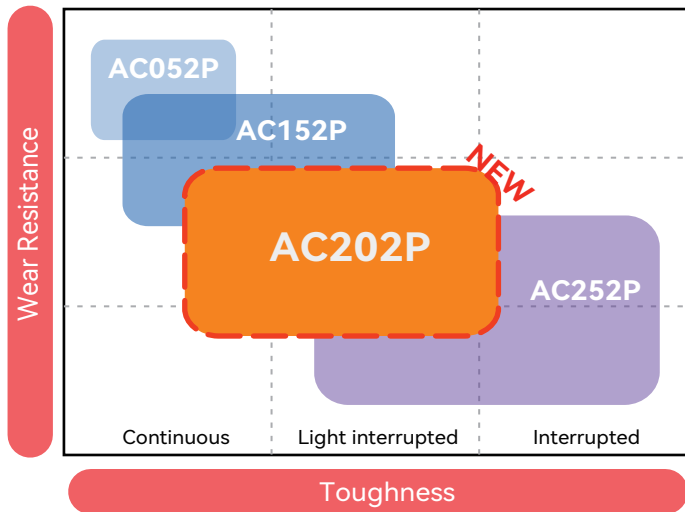
NO.110

[www.achtecktool.com](http://www.achtecktool.com)

# AC202P

New generation CVD coating of crystal oriented Alumina layer and substrate of excellent toughness, ensure stability and high wear resistance.

## Application Range



NEW

### AC202P

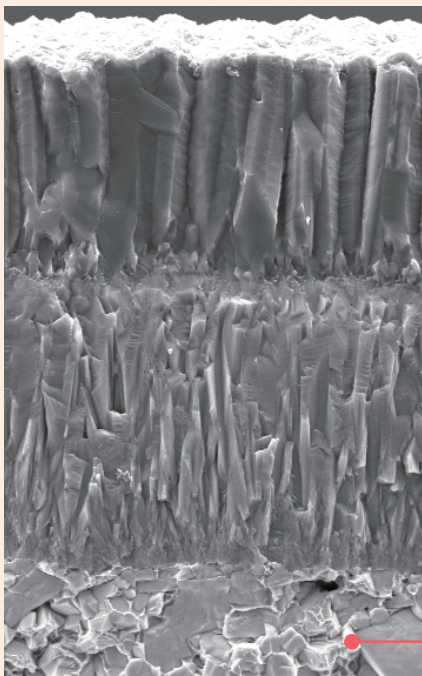
ACHTECK

Apply to continuous, unstable and light interrupted application, stable machining in a wider application range.

- Crater Wear Resistance 1.5x
- Reliability and Stability 1.5x
- Wear Resistance 1.4x

## Grade Feature

ACHTECK



### Crystal Oriented Alumina Layer

Significantly improve thermal barrier performance and crater wear resistance by controlling crystal grown direction of Alumina layer, with fine and dense crystal structure, Wear resistance increased by more than 0.4x.

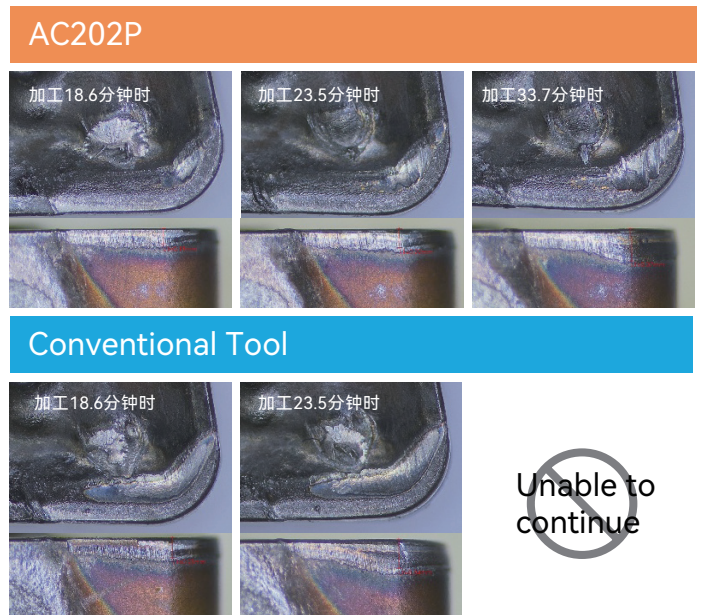
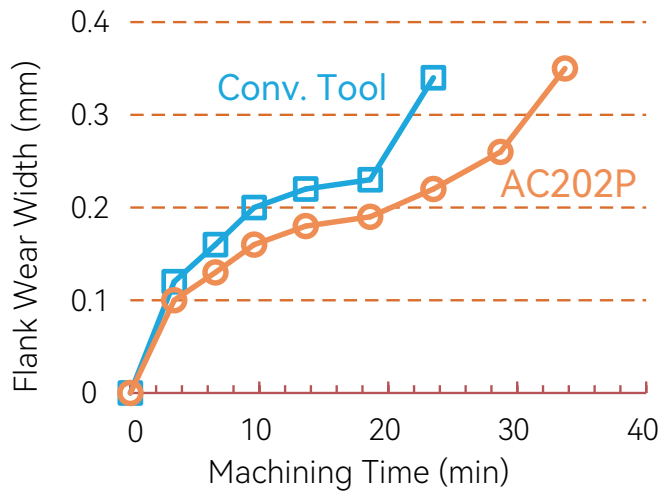
### High Hardness Fine Grained TiCN Layer

Fine and uniform crystal structure, greatly improving coating hardness.

### Hardmetal Substrate

Adopting ultra-fine grain matrix and new gradient sintering technology, the substrate has both high wear resistance and excellent toughness, gradient cobalt rich layer for better safety.

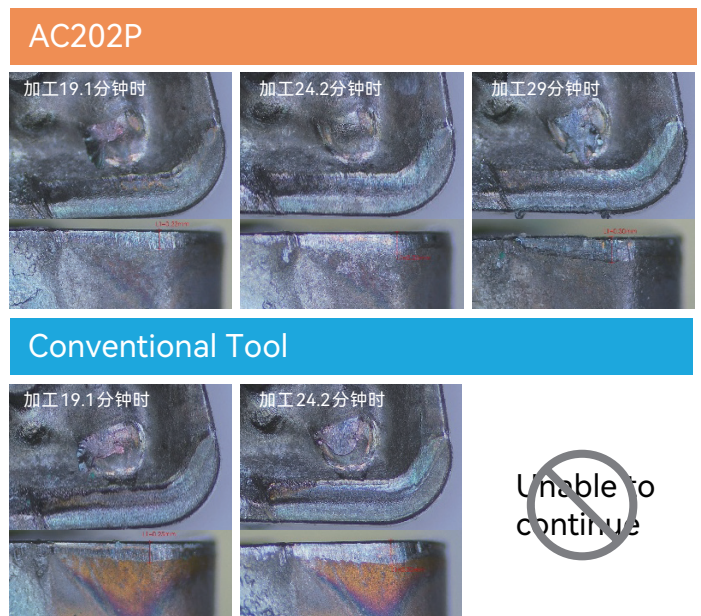
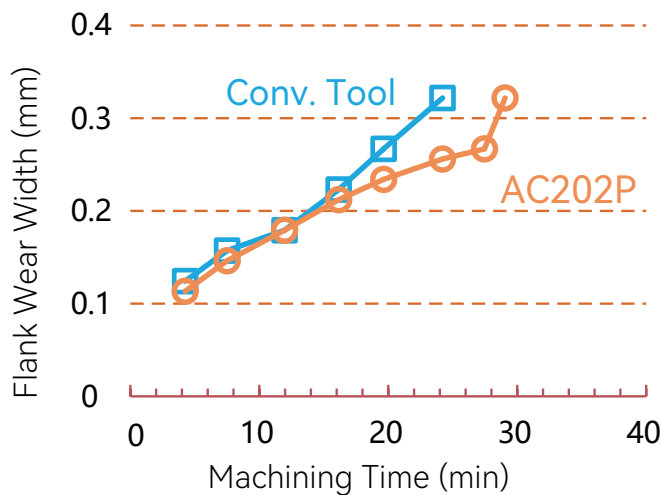
## AC202P Cutting Performance (Continuous Wet Cutting)



Wear resistance 1.4x or more,  
and crater wear resistance 1.5x or more

Material: 4140 Rod HB250 Insert: WNMG 080408E-PD3 AC202P Conditions:  $V_c=250\text{m/min}$   $f=0.35\text{mm/rev}$   $a_p=2.0\text{mm}$  Wet

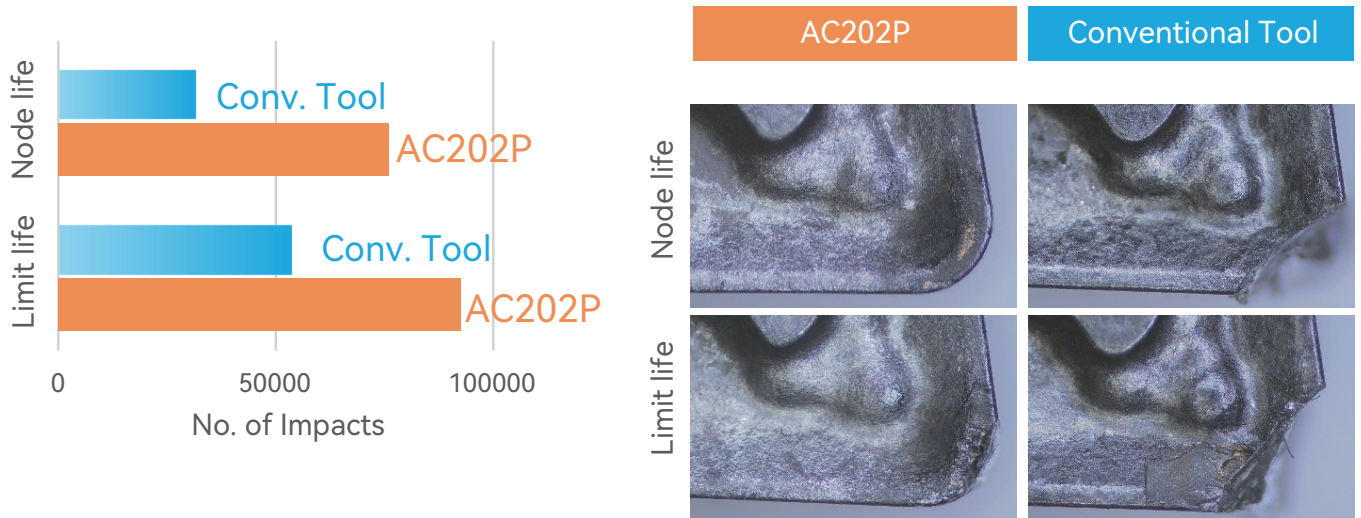
## AC202P Cutting Performance (Continuous Dry Cutting)



Plastic deformation resistance 1.5x or more

Material: 4140 Rod HB250 Insert: WNMG 080408E-PD3 AC202P Conditions:  $V_c=200\text{m/min}$   $f=0.35\text{mm/rev}$   $a_p=2.0\text{mm}$  Dry

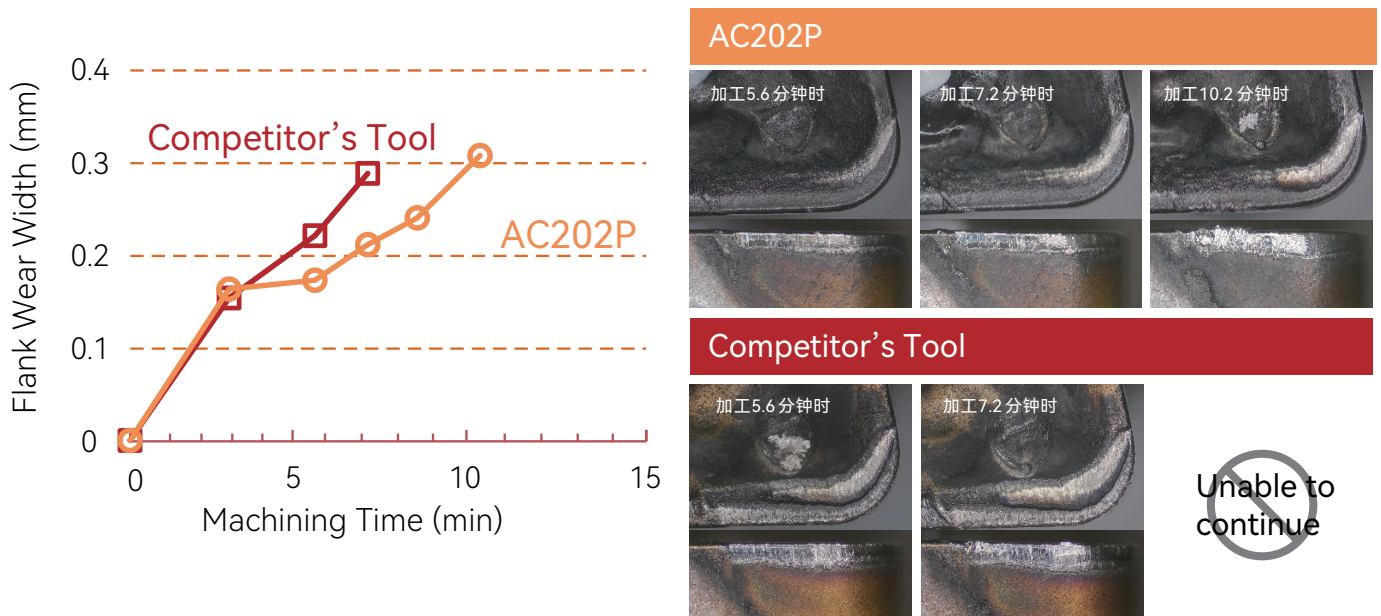
## AC202P Cutting Performance (Interrupted Cutting)



Balance of stability and wear resistance, chipping resistance 1.5x or more

Material: 4140 HB250 Insert: WNMG 080408E-PD3 AC202P Conditions:  $V_c=180\text{m/min}$   $f=0.25\text{mm/rev}$   $a_p=1.0\text{mm}$  Wet

## AC202P Cutting Performance (Continuous Wet Cutting)


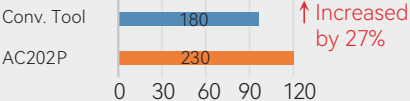


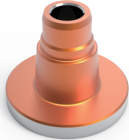
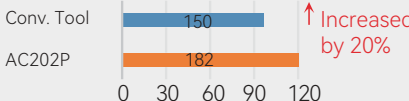
Material: 4140 HB300 Insert: WNMG 080408E-PD3 AC202P Conditions:  $V_c=250\text{m/min}$   $f=0.35\text{mm/rev}$   $a_p=2.0\text{mm}$  Wet

## AC202P Recommended Cutting Parameter

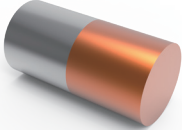
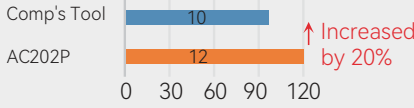
Insert Shape	Chipbreaker	Medium Carbon Steel (S45C, etc.) Low Alloy Steel (4140, etc.) 180HB or more		
		ap(mm)	f (mm/rev)	Vc (m/min)
CNMG 120408	PB1	0.52-3.20	0.10-0.30	200- <b>300</b> -400
TNMG 160408	PB3	0.60-3.30	0.12-0.36	150- <b>250</b> -350
WNMG 080408	PD3	0.80-2.90	0.15-0.44	150- <b>250</b> -350
CNMG 160612	PD5	1.80-8.10	0.30-0.90	110- <b>180</b> -250
DCMT 11T304	KC2	0.40-3.50	0.06-0.18	200- <b>300</b> -400
VBMT 160404	PC2	0.35-3.10	0.05-0.16	200- <b>300</b> -400


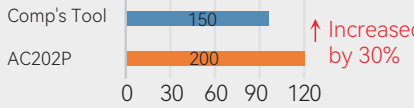
## AC202P Success Stories

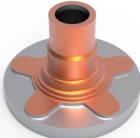
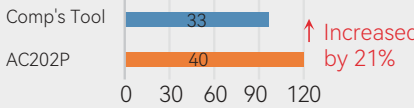
Insert	WNMG 080412E-PD3 AC202P
Workpiece	Planet gear 
Material	40CrMo Alloy steel
Processing	Ext. and End Face (Con. and int.)
Cutting Speed	226m/min
Feed rate	0.20mm/rev
Cutting depth	1.5mm
Coolant	Emulsion
Result	 <p>↑ Increased by 27%</p> <p>Tool life for 1.27X longer than competitor tools</p>


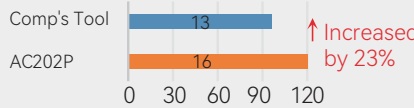
Insert	WNMG 080408E-PD2 AC202P
Workpiece	Flange 
Material	C45 Carbon steel
Processing	Ext. and End Face (Continuous)
Cutting Speed	300m/min
Feed rate	0.20mm/rev
Cutting depth	1.5mm
Coolant	Emulsion
Result	 <p>↑ Increased by 20%</p> <p>Tool life for 1.20X longer and more stable machining than Competitor</p>

## AC202P Success Stories

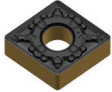
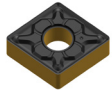
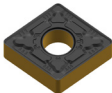
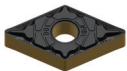
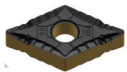
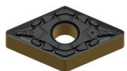
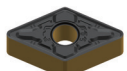

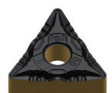
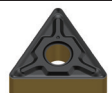
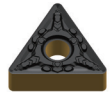
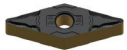
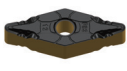
Insert	WNMG 080408E-PD3 AC202P
Workpiece	Center gear 
Material	20CrMnMo Q&T Alloy steel
Processing	Ext.and End Face (Continuous)
Cutting Speed	260m/min
Feed rate	0.18-0.25 mm/rev
Cutting depth	2.0mm
Coolant	Emulsion
Result	 <p>↑ Increased by 20%</p> <p>Tool life for 1.20X longer than competitor</p>

Insert	WNMG 080408E-PB3 AC202P
Workpiece	Intermediate shaft 
Material	20CrMoTi Gear steel
Processing	Ext.and End Face (Continuous)
Cutting Speed	108-198m/min
Feed rate	0.30mm/rev
Cutting depth	0.6-1.5mm
Coolant	Emulsion
Result	 <p>↑ Increased by 30%</p> <p>Tool life for 1.30X longer and stable machining</p>

Insert	WNMG 080412E-PD3 AC202P
Workpiece	Wheel hub 
Material	55# Carbon steel
Processing	Ext.and End Face(Con. and int.)
Cutting Speed	300m/min
Feed rate	0.28mm/rev
Cutting depth	1.0mm
Coolant	Emulsion
Result	 <p>↑ Increased by 21%</p> <p>Tool life for 1.21X longer than competitor tools</p>

Insert	WNMG 080412E-PD3 AC202P
Workpiece	Bearing race 
Material	GCr15 Bearing steel
Processing	Ext.and End Face (Continuous)
Cutting Speed	389m/min
Feed rate	0.39mm/rev
Cutting depth	1.5mm
Coolant	Emulsion
Result	 <p>↑ Increased by 23%</p> <p>Tool life for 1.23X longer and stable machining</p>

## Product List

Insert	Product Code	Recommended Parameters		Dimensions (mm)				Grade
		Ap (mm)	f (mm/rev)	d	l	s	r	AC202P
	CNMG 120408E-PD3	0.80-4.30	0.15-0.44	12.7	12.89	4.76	0.8	●
	CNMG 120412E-PD3	1.20-4.30	0.23-0.66	12.7	12.89	4.76	1.2	●
	CNMG 120408E-UC4	0.80-5.00	0.15-0.48	12.7	12.89	4.76	0.8	○
	CNMG 120412E-UC4	1.20-5.00	0.23-0.72	12.7	12.89	4.76	1.2	○
	CNMG 190612E-PD5	1.80-9.70	0.30-0.90	19.05	19.34	6.35	1.2	○
	DNMG 150408E-PB1	0.52-3.10	0.10-0.30	12.7	15.49	4.76	0.8	●
	DNMG 150404E-PB3	0.30-3.10	0.06-0.18	12.7	15.49	4.76	0.4	●
	DNMG 150408E-PB3	0.60-3.10	0.12-0.36	12.7	15.49	4.76	0.8	●
	DNMG 150604E-PB3	0.30-3.10	0.06-0.18	12.7	15.49	6.35	0.4	●
	DNMG 150608E-PB3	0.60-3.10	0.12-0.36	12.7	15.49	6.35	0.8	●
	DNMG 150408E-PD3	0.80-3.90	0.15-0.44	12.7	15.49	4.76	0.8	●
	DNMG 150412E-PD3	1.20-3.90	0.23-0.66	12.7	15.49	4.76	1.2	○
	DNMG 150604E-PD3	0.40-3.90	0.08-0.22	12.7	15.49	6.35	0.4	○
	DNMG 150608E-PD3	0.80-3.90	0.15-0.44	12.7	15.49	6.35	0.8	●
	DNMG 150612E-PD5	1.80-5.40	0.30-0.90	12.7	15.49	6.35	1.2	○
	SNMG 120412E-PB1	0.78-3.20	0.15-0.45	12.7	12.7	4.76	1.2	○
	TNMG 160404E-PB3	0.30-3.30	0.06-0.18	9.53	16.5	4.76	0.4	●
	TNMG 160408E-PB3	0.60-3.30	0.12-0.36	9.53	16.5	4.76	0.8	●
	TNMG 160412E-PB3	0.90-3.30	0.18-0.54	9.53	16.5	4.76	1.2	●
	TNMG 160408E-UC4	0.80-4.50	0.15-0.48	9.53	16.5	4.76	0.8	●
	TNMG 160412E-PD3	1.20-4.10	0.23-0.66	9.53	16.5	4.76	1.2	●
	VNMG 160404E-PB1	0.26-2.10	0.05-0.15	9.53	16.61	4.76	0.4	●
	VNMG 160408E-PB1	0.52-2.10	0.10-0.30	9.53	16.61	4.76	0.8	●
	VNMG 160404E-PB3	0.30-3.10	0.06-0.18	9.53	16.61	4.76	0.4	●
	VNMG 160408E-PB3	0.60-3.10	0.12-0.36	9.53	16.61	4.76	0.8	●
	VNMG 160412E-PB3	0.90-3.10	0.18-0.54	9.53	16.61	4.76	1.2	●

●: Standard stock ○: Made-to-Order

## Product List

Insert	Product Code	Recommended Parameters		Dimensions (mm)				Grade
		f (mm/rev)	Ap (mm)	d	l	s	r	AC202P
	VNMG 160404E-PD3	0.40-3.30	0.08-0.22	9.53	16.61	4.76	0.4	○
	VNMG 160408E-PD3	0.80-3.30	0.15-0.44	9.53	16.61	4.76	0.8	●
	WNMG 080408E-PB1	0.52-2.20	0.10-0.30	12.7	8.69	4.76	0.8	○
	WNMG 080404E-PB3	0.30-2.30	0.06-0.18	12.7	8.69	4.76	0.4	●
	WNMG 080408E-PB3	0.60-2.30	0.12-0.36	12.7	8.69	4.76	0.8	●
	WNMG 080412E-PB3	0.90-2.30	0.18-0.54	12.7	8.69	4.76	1.2	●
	WNMG 080412E-PC3	1.02-2.60	0.20-0.60	12.7	8.69	4.76	1.2	●
	WNMG 080408E-UC4	0.80-3.20	0.15-0.48	12.7	8.69	4.76	0.8	●
	WNMG 080412E-UC4	1.20-3.20	0.23-0.72	12.7	8.69	4.76	1.2	●
	WNMG 080404E-PD3	0.40-2.90	0.08-0.22	12.7	8.69	4.76	0.4	●
	WNMG 080408E-PD3	0.80-2.90	0.15-0.44	12.7	8.69	4.76	0.8	●
	WNMG 080412E-PD3	1.20-2.90	0.23-0.66	12.7	8.69	4.76	1.2	●
	RCMX 320900S	5.00-15.90	0.65-1.50					○
	CCMT 09T304E-PB1	0.30-2.40	0.04-0.14	9.53	9.67	3.97	0.4	●
	CCMT 09T308E-PB1	0.60-2.40	0.09-0.28	9.53	9.67	3.97	0.8	○
	DCMT 11T304E-PB1	0.30-2.30	0.04-0.14	9.53	11.62	3.97	0.4	●
	DCMT 11T308E-PB1	0.60-2.30	0.09-0.28	9.53	11.62	3.97	0.8	●
	VBMT 160404E-PB1	0.30-2.10	0.04-0.14	9.53	16.61	4.76	0.4	●
	VBMT 160408E-PB1	0.60-2.10	0.09-0.28	9.53	16.61	4.76	0.8	○
	VBMT 160404E-PC2	0.35-3.10	0.05-0.16	9.53	16.61	4.76	0.4	○
	VBMT 160408E-PC2	0.70-3.10	0.10-0.32	9.53	16.61	4.76	0.8	○
	VBMT 160404E-KC2	0.40-3.30	0.06-0.18	9.53	16.61	4.76	0.4	●

●: Standard stock ○: Made-to-Order