

**NEW
PRODUCT!**

AC200P

New Generation Grade for steel turning

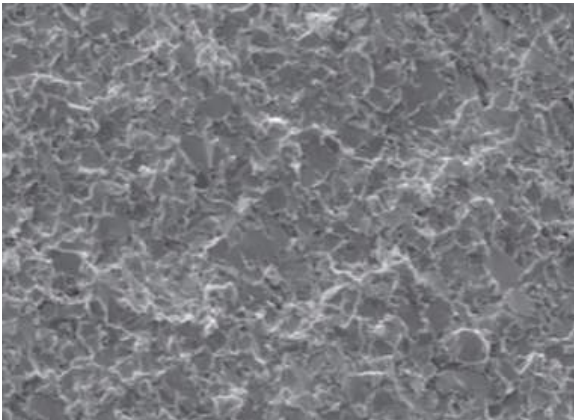


ACHTECK has launched a new generation grade AC200P for steel turning which has carried out all-round technical innovation on the substrate and coating. The gradient alloy substrate prepared by special atmosphere sintering process has a microstructure composite, which can prevent the surface crack from spreading to the core of the substrate, enhance the toughness and improve the anti-collapse ability of the substrate. The new CVD coating is designed for steel turning, which adopts the composite structure of thickened ultra-fine grain medium temperature TiCN coating and columnar α - Al_2O_3 coating. It has higher wear resistance and toughness than the traditional CVD composite coating, and can obtain longer tool life and better stability.

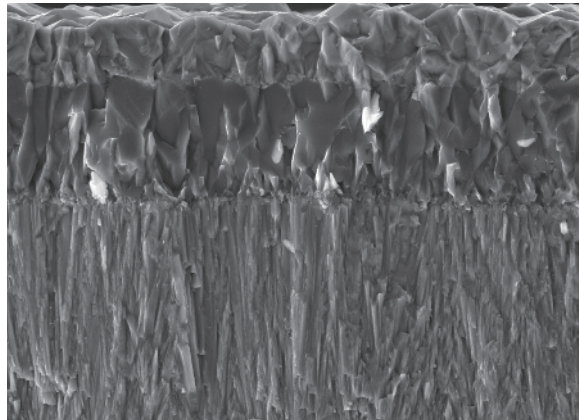
Grade Features

AC200P for ISO:P10-P25 application

- High hardness, special high toughness substrate
- Coating structure



<Substrate SEM micro structure>

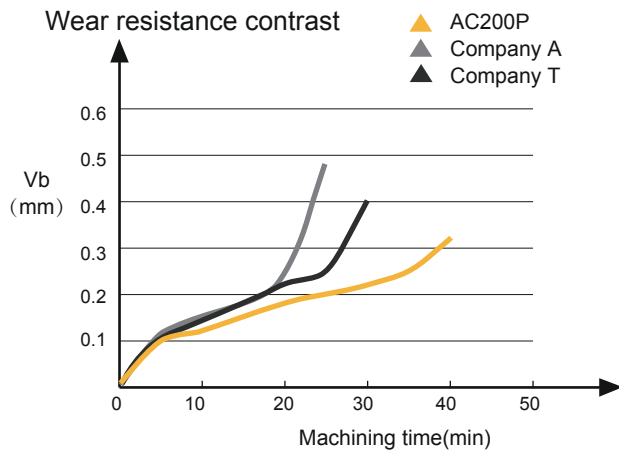


<Coating SEM micro structure>

- Gradient alloy substrate prepared by sintering in special atmosphere
- Excellent wear resistance and breakage resistance
- Grain refinement and high impact resistance
- TiCN Medium temperature TiCN of ultrafine grains
- Columnar α - Al_2O_3 composite structure coating
- New needle-shaped structure transition layer, more solid coating combination
- Higher wear resistance and toughness

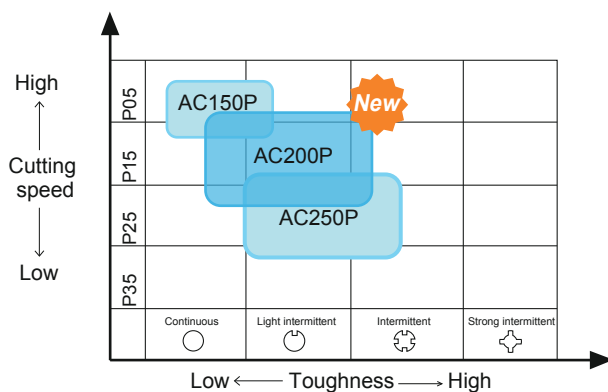
Excellent wear resistance

The new CVD coating is aimed at steel turning, which adopts the composite structure of thickened ultrafine grain medium temperature TiCN coating and columnar α -Al₂O₃ coating.



Cutting conditions :
Materials : 40CrNiMoA
Vc=320m/min ap=2mm f=0.3mm/rev Wet

Application range



Chip breaker application

- PB1 (Finishing)**
Low cutting force, suitable for machining slender shaft, thin wall and unstable cutting. First option for Clamping parts finishing machining
- PD3 (Medium)**
The three-point-boss-chipbreaking design ensures good chip holding, chip breaking and chip removing ability, and PD3 chipbreaker is the 1st choice for medium machining
- PD5 (Roughing)**
The double-front-angle design can effectively reduce the cutting resistance on the premise of ensuring the edge strength, and the chip breaking is the first choice during rough machining

Recommended cutting speed

Material					AC200P		
					Machining speed(m/min)		
ISO	Classification	Material group	Strength/Hardness		Low feed	Medium feed	High feed
P	A	Unalloyed steel	<600N/mm ²	<180HBN	400	340	280
	B		<950N/mm ²	<280HBN	340	260	200
	C	Alloy steel	700-950N/mm ²	200-280HBN	260	200	170
	D		950-1200N/mm ²	280-355HBN	240	180	140
	E		1200-1400N/mm ²	355-415HBN	210	160	120

Remark): The recommended cutting speed always refer to general conditons. These cutting speed should be adjusted according to the practical machine rigidity, tools, work piece clamping and coolants

Case stories

Workpiece: Fixing wheel

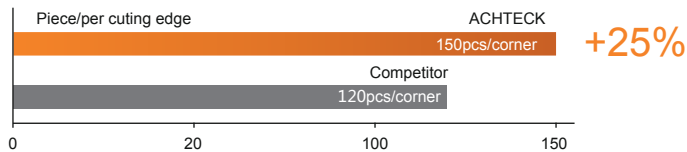
Material: 20CrMnTi

Insert: WNMG 080408E-PD3 AC200P

Competitor: WNMG 080408-TM

Cutting Parameters: $V_c=330\text{m/min}$, $a_p=1.8\text{mm}$, $f=0.25\text{mm/rev}$

Wet



Workpiece: Hub

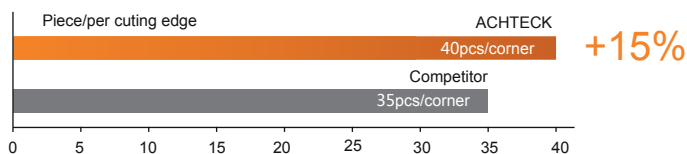
Material: 55# Steel

Insert: WNMG 080412E-PD3 AC200P

Competitor: WNMG 080412-TM

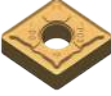
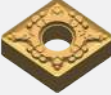
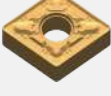
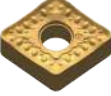
Cutting Parameters: $V_c=245-312\text{m/min}$, $a_p=1.5\text{mm}$, $f=0.35\text{mm/rev}$

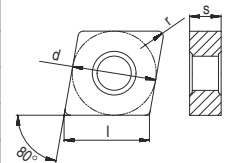
Wet



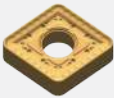
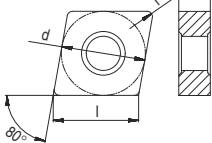
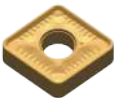
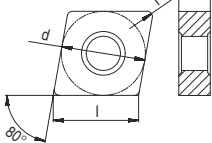
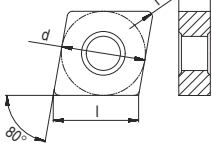
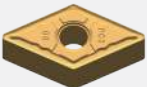
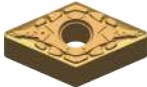
• Stock items

Negative insert

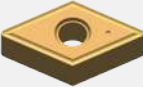
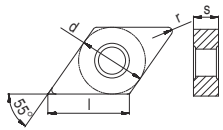
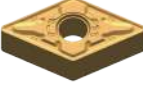
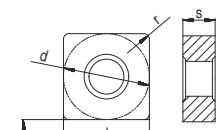
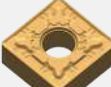
Insert	Item designation	Recommended cutting parameters		Dimension (mm)				Grade (CVD)	Geometry
		Feed (mm/rev)	Ap (mm)	d	l	s	r	AC200P	
	CNMG 120404E-PB1	0.05-0.15	0.26-3.2	12.7	12.9	4.76	0.4	○	
	120408E-PB1	0.10-0.30	0.52-3.2	12.7	12.9	4.76	0.8	○	
	120412E-PB1	0.15-0.45	0.78-3.2	12.7	12.9	4.76	1.2	○	
	CNMG 120404E-PB3	0.06-0.18	0.30-3.5	12.7	12.9	4.76	0.4	○	
	120408E-PB3	0.12-0.36	0.60-3.5	12.7	12.9	4.76	0.8	○	
	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	○	
	120408E-PC3	0.14-0.40	0.68-3.9	12.7	12.9	4.76	0.8	●	
	120412E-PC3	0.20-0.60	1.02-3.9	12.7	12.9	4.76	1.2	○	
	190608E-PC3	0.14-0.40	0.68-5.8	19.05	19.3	6.35	0.8	○	
	190612E-PC3	0.20-0.60	1.02-5.8	19.05	19.3	6.35	1.2	●	
	CNMG 120404E-PD3	0.08-0.22	0.40-4.3	12.7	12.9	4.76	0.4	●	
	120408E-PD3	0.15-0.44	0.80-4.3	12.7	12.9	4.76	0.8	●	
	120412E-PD3	0.23-0.66	1.20-4.3	12.7	12.9	4.76	1.2	●	
	160608E-PD3	0.15-0.44	0.80-5.3	15.875	16.1	6.35	0.8	○	
	160612E-PD3	0.23-0.66	1.20-5.3	15.875	16.1	6.35	1.2	●	
	190608E-PD3	0.15-0.44	0.80-6.4	19.05	19.3	6.35	0.8	○	
	CNMG 120404E-PC4	0.08-0.22	0.40-4.3	12.7	12.9	4.76	0.4	○	
	120408E-PC4	0.15-0.44	0.80-4.3	12.7	12.9	4.76	0.8	○	
	120412E-PC4	0.23-0.66	1.20-4.3	12.7	12.9	4.76	1.2	○	
	160608E-PC4	0.15-0.44	0.80-5.3	15.875	16.1	6.35	0.8	○	
	160612E-PC4	0.23-0.66	1.20-5.3	15.875	16.1	6.35	1.2	○	
	160616E-PC4	0.30-0.88	1.60-5.3	15.875	16.1	6.35	1.6	○	
	190608E-PC4	0.15-0.44	0.80-6.4	19.05	19.3	6.35	0.8	○	
	190612E-PC4	0.23-0.66	1.20-6.4	19.05	19.3	6.35	1.2	●	
	190616E-PC4	0.30-0.88	1.60-6.4	19.05	19.3	6.35	1.6	○	
	CNMG 120408E-PD5	0.20-0.60	1.20-6.4	12.7	12.9	4.76	0.8	○	
	120412E-PD5	0.30-0.90	1.80-6.4	12.7	12.9	4.76	1.2	○	
	160612E-PD5	0.30-0.90	1.80-8.1	15.875	16.1	6.35	1.2	●	
	160616E-PD5	0.40-1.20	2.40-8.1	15.875	16.1	6.35	1.6	○	
	190612E-PD5	0.30-0.90	1.80-9.7	19.05	19.3	6.35	1.2	○	
	190616E-PD5	0.40-1.20	2.40-9.7	19.05	19.3	6.35	1.6	●	
	CNMM 120408E-PD8	0.16-0.32	1.44-5.2	12.7	12.9	4.76	0.8	○	
	120412E-PD8	0.24-0.48	2.16-5.2	12.7	12.9	4.76	1.2	○	
	160612E-PD8	0.24-0.48	2.16-6.4	15.875	16.1	6.35	1.2	○	
	160616E-PD8	0.32-0.64	2.88-6.4	15.875	16.1	6.35	1.6	○	
	160624E-PD8	0.48-0.96	4.32-6.4	15.875	16.1	6.35	2.4	○	
	190612S-PD8	0.24-0.48	2.16-7.7	19.05	19.3	6.35	1.2	○	
	190616S-PD8	0.32-0.64	2.88-7.7	19.05	19.3	6.35	1.6	○	
	190624S-PD8	0.48-0.96	4.32-7.7	19.05	19.3	6.35	2.4	○	
	250724S-PD8	0.48-0.96	4.32-10.3	25.4	25.8	7.94	2.4	○	
	250924S-PD8	0.48-0.96	4.32-10.3	25.4	25.8	9.525	2.4	○	



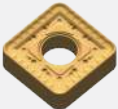
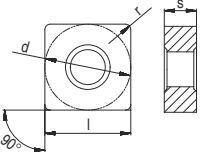
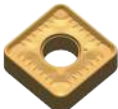
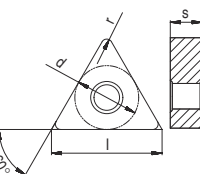
● Marked: represent for standard stock
○ Marked: represent for Make-To-Order

Insert	Item designation	Recommended cutting parameters		Dimension (mm)				Grade (CVD)	Geometry
		Feed (mm/rev)	Ap (mm)	d	l	s	r	AC200P	
	CNMM 190612S-PC9	0.26-0.60	2.40-9.7	19.05	19.3	6.35	1.2	○	
	190616S-PC9	0.35-0.80	3.20-9.7	19.05	19.3	6.35	1.6	○	
	190624S-PC9	0.53-1.20	4.80-9.7	19.05	19.3	6.35	2.4	○	
	250724S-PC9	0.53-1.20	4.80-12.9	25.4	25.8	7.94	2.4	○	
	250924S-PC9	0.53-1.20	4.80-12.9	25.4	25.8	9.525	2.4	●	
	CNMM 190612S-PD9	0.30-0.72	2.64-11.6	19.05	19.3	6.35	1.2	○	
	190616S-PD9	0.40-0.96	3.52-11.6	19.05	19.3	6.35	1.6	●	
	190624S-PD9	0.60-1.44	5.28-11.6	19.05	19.3	6.35	2.4	○	
	250724S-PD9	0.60-1.44	5.28-15.5	25.4	25.8	7.94	2.4	○	
	250924S-PD9	0.60-1.44	5.28-15.5	25.4	25.8	9.525	2.4	○	
	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	○	
	DNMG 150404E-PB3	0.06-0.18	0.30-3.1	12.7	15.5	4.76	0.4	○	
	150408E-PB3	0.12-0.36	0.60-3.1	12.7	15.5	4.76	0.8	○	
	150412E-PB3	0.18-0.54	0.90-3.1	12.7	15.5	4.76	1.2	○	
	150604E-PB3	0.06-0.18	0.30-3.1	12.7	15.5	6.35	0.4	●	
	150608E-PB3	0.12-0.36	0.60-3.1	12.7	15.5	6.35	0.8	○	
	150612E-PB3	0.18-0.54	0.90-3.1	12.7	15.5	6.35	1.2	○	
	DNMG 110408E-PC3	0.14-0.40	0.68-2.6	9.525	11.62	4.76	0.8	○	
	110412E-PC3	0.20-0.60	1.02-2.6	9.525	11.62	4.76	1.2	○	
	150404E-PC3	0.07-0.20	0.34-3.5	12.7	15.5	4.76	0.4	○	
	150408E-PC3	0.14-0.40	0.68-3.5	12.7	15.5	4.76	0.8	●	
	150412E-PC3	0.20-0.60	1.02-3.5	12.7	15.5	4.76	1.2	○	
	150604E-PC3	0.07-0.20	0.34-3.5	12.7	15.5	6.35	0.4	○	
	150608E-PC3	0.14-0.40	0.68-3.5	12.7	15.5	6.35	0.8	●	
	150612E-PC3	0.20-0.60	1.02-3.5	12.7	15.5	6.35	1.2	○	
	DNMG 110404E-PD3	0.08-0.22	0.40-2.9	9.525	11.62	4.76	0.4	○	
	110408E-PD3	0.15-0.44	0.80-2.9	9.525	11.62	4.76	0.8	○	
	110412E-PD3	0.23-0.66	1.20-2.9	9.525	11.62	4.76	1.2	○	
	150404E-PD3	0.08-0.22	0.40-3.9	12.7	15.5	4.76	0.4	○	
	150408E-PD3	0.15-0.44	0.80-3.9	12.7	15.5	4.76	0.8	●	
	150412E-PD3	0.23-0.66	1.20-3.9	12.7	15.5	4.76	1.2	○	
	150604E-PD3	0.08-0.22	0.40-3.9	12.7	15.5	6.35	0.4	○	
	150608E-PD3	0.15-0.44	0.80-3.9	12.7	15.5	6.35	0.8	●	
	150612E-PD3	0.23-0.66	1.20-3.9	12.7	15.5	6.35	1.2	●	

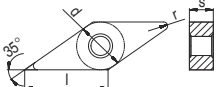
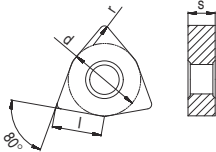
● Marked: represent for standard stock
○ Marked: represent for Make-To-Order

Insert	Item designation	Recommended cutting parameters		Dimension (mm)				Grade (CVD)	Geometry
		Feed (mm/rev)	Ap (mm)	d	l	s	r	AC200P	
	DNMG 150404E-PC4	0.09-0.24	0.48-4.6	12.7	15.5	4.76	0.4	○	
	150408E-PC4	0.18-0.48	0.96-4.6	12.7	15.5	4.76	0.8	○	
	150412E-PC4	0.26-0.72	1.44-4.6	12.7	15.5	4.76	1.2	○	
	150604E-PC4	0.09-0.24	0.48-4.6	12.7	15.5	6.35	0.4	○	
	150608E-PC4	0.18-0.48	0.96-4.6	12.7	15.5	6.35	0.8	○	
	150612E-PC4	0.26-0.72	1.44-4.6	12.7	15.5	6.35	1.2	○	
	DNMG 150408E-PD5	0.20-0.60	1.20-5.4	12.7	15.5	4.76	0.8	○	
	150412E-PD5	0.30-0.90	1.80-5.4	12.7	15.5	4.76	1.2	○	
	150416E-PD5	0.40-1.20	2.40-5.4	12.7	15.5	4.76	1.6	○	
	150608E-PD5	0.20-0.60	1.20-5.4	12.7	15.5	6.35	0.8	○	
	150612E-PD5	0.30-0.90	1.80-5.4	12.7	15.5	6.35	1.2	●	
	150616E-PD5	0.40-1.20	2.40-5.4	12.7	15.5	6.35	1.6	○	
	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	○	
	SNMG 120404E-PC3	0.07-0.20	0.34-3.8	12.7	12.7	4.76	0.4	○	
	120408E-PC3	0.14-0.40	0.68-3.8	12.7	12.7	4.76	0.8	○	
	120412E-PC3	0.20-0.60	1.02-3.8	12.7	12.7	4.76	1.2	○	
	SNMG 120404E-PD3	0.08-0.22	0.40-4.2	12.7	12.7	4.76	0.4	○	
	120408E-PD3	0.15-0.44	0.80-4.2	12.7	12.7	4.76	0.8	●	
	120412E-PD3	0.23-0.66	1.20-4.2	12.7	12.7	4.76	1.2	○	
	190608E-PD3	0.15-0.44	0.80-6.3	19.05	19.05	6.35	0.8	○	
	SNMG 120404E-PC4	0.08-0.22	0.40-4.2	12.7	12.7	4.76	0.4	○	
	120408E-PC4	0.15-0.44	0.80-4.2	12.7	12.7	4.76	0.8	○	
	120412E-PC4	0.23-0.66	1.20-4.2	12.7	12.7	4.76	1.2	○	
	SNMG 150608E-PD5	0.20-0.60	1.20-7.9	15.875	15.875	6.35	0.8	○	
	150612E-PD5	0.30-0.90	1.80-7.9	15.875	15.875	6.35	1.2	○	
	150616E-PD5	0.40-1.20	2.40-7.9	15.875	15.875	6.35	1.6	○	
	190612E-PD5	0.30-0.90	1.80-9.5	19.05	19.05	6.35	1.2	○	
	190616E-PD5	0.40-1.20	2.40-9.5	19.05	19.05	6.35	1.6	○	
	SNMM 120408S-PD8	0.16-0.32	1.44-5.1	12.7	12.7	4.76	0.8	○	
	120412S-PD8	0.24-0.48	2.16-5.1	12.7	12.7	4.76	1.2	○	
	150612S-PD8	0.24-0.48	2.16-6.4	15.875	15.875	6.35	1.2	○	
	150616S-PD8	0.32-0.64	2.88-6.4	15.875	15.875	6.35	1.6	○	
	190612S-PD8	0.24-0.48	2.16-7.6	19.05	19.05	6.35	1.2	○	
	190616S-PD8	0.32-0.64	2.88-7.6	19.05	19.05	6.35	1.6	○	
	190624S-PD8	0.48-0.96	4.32-7.6	19.05	19.05	6.35	2.4	○	
	250724S-PD8	0.48-0.96	4.32-10.2	25.4	25.4	7.94	2.4	○	
	250924S-PD8	0.48-0.96	4.32-10.2	25.4	25.4	9.525	2.4	○	

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

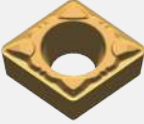
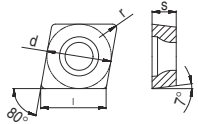
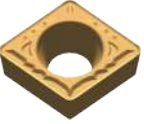
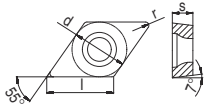
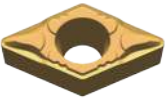
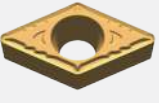
Insert	Item designation	Recommended cutting parameters		Dimension (mm)				Grade (CVD)	Geometry
		Feed (mm/rev)	Ap (mm)	d	l	s	r	AC200P	
	SNMM 190612S-PC9	0.26-0.60	2.40-9.5	19.05	19.05	6.35	1.2	○	
	190616S-PC9	0.35-0.80	3.20-9.5	19.05	19.05	6.35	1.6	○	
	190624S-PC9	0.53-1.20	4.80-9.5	19.05	19.05	6.35	2.4	○	
	250724S-PC9	0.53-1.20	4.80-12.7	25.4	25.4	7.94	2.4	○	
	250924S-PC9	0.53-1.20	4.80-12.7	25.4	25.4	9.525	2.4	●	
	SNMM 190612S-PD9	0.30-0.72	2.64-11.4	19.05	19.05	6.35	1.2	○	
	190616S-PD9	0.40-0.96	3.52-11.4	19.05	19.05	6.35	1.6	○	
	190624S-PD9	0.60-1.44	5.28-11.4	19.05	19.05	6.35	2.4	○	
	250724S-PD9	0.60-1.44	5.28-15.2	25.4	25.4	7.94	2.4	○	
	250924S-PD9	0.60-1.44	5.28-15.2	25.4	25.4	9.525	2.4	●	
	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	○	
	TNMG 160404E-PB3	0.06-0.18	0.30-3.3	9.525	16.5	4.76	0.4	○	
	160408E-PB3	0.12-0.36	0.60-3.3	9.525	16.5	4.76	0.8	●	
	160412E-PB3	0.18-0.54	0.90-3.3	9.525	16.5	4.76	1.2	○	
	TNMG 160404E-PC3	0.07-0.20	0.34-3.7	9.525	16.5	4.76	0.4	●	
	160408E-PC3	0.14-0.40	0.68-3.7	9.525	16.5	4.76	0.8	○	
	160412E-PC3	0.20-0.60	1.02-3.7	9.525	16.5	4.76	1.2	○	
	TNMG 160404E-PD3	0.08-0.22	0.40-4.1	9.525	16.5	4.76	0.4	○	
	160408E-PD3	0.15-0.44	0.80-4.1	9.525	16.5	4.76	0.8	●	
	160412E-PD3	0.23-0.66	1.20-4.1	9.525	16.5	4.76	1.2	●	
	TNMG 160404E-PC4	0.08-0.22	0.40-4.1	9.525	16.5	4.76	0.4	○	
	160408E-PC4	0.15-0.44	0.80-4.1	9.525	16.5	4.76	0.8	○	
	160412E-PC4	0.23-0.66	1.20-4.1	9.525	16.5	4.76	1.2	○	
	220412E-PC4	0.23-0.66	1.20-4.9	12.7	22.0	4.76	1.2	○	
	TNMG 160404R-PL5	0.08-0.22	0.40-4.1	9.525	16.5	4.76	0.4	○	
	160408R-PL5	0.15-0.44	0.80-4.1	9.525	16.5	4.76	0.8	○	
	160404L-PL5	0.08-0.22	0.40-4.1	9.525	16.5	4.76	0.4	○	
	160408L-PL5	0.15-0.44	0.80-4.1	9.525	16.5	4.76	0.8	○	
	TNMG 160408E-PD5	0.20-0.60	1.20-5.8	9.525	16.5	4.76	0.8	○	
	160412E-PD5	0.30-0.90	1.80-5.8	9.525	16.5	4.76	1.2	○	
	220408E-PD5	0.20-0.60	1.20-7.7	12.7	22.0	4.76	0.8	○	
	220412E-PD5	0.30-0.90	1.80-7.7	12.7	22.0	4.76	1.2	○	
	220416E-PD5	0.40-1.20	2.40-7.7	12.7	22.0	4.76	1.6	○	
	TNMM 160408E-PD8	0.16-0.32	1.44-4.9	9.525	16.5	4.76	0.8	○	
	160412E-PD8	0.24-0.48	2.16-4.9	9.525	16.5	4.76	1.2	○	
	220408E-PD8	0.16-0.32	1.44-6.0	12.7	22.0	4.76	0.8	○	
	220412E-PD8	0.24-0.48	2.16-6.0	12.7	22.0	4.76	1.2	○	
	220416E-PD8	0.32-0.64	2.88-6.0	12.7	22.0	4.76	1.6	○	

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

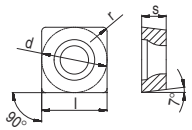
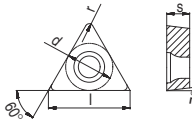
Insert	Item designation	Recommended cutting parameters		Dimension (mm)				Grade (CVD)	Geometry
		Feed (mm/rev)	Ap (mm)	d	l	s	r	AC200P	
	VNMG 160404E-PB1	0.05-0.15	0.26-2.1	9.525	16.5	4.76	0.4	○	
	160408E-PB1	0.10-0.30	0.52-2.1	9.525	16.5	4.76	0.8	●	
	160412E-PB1	0.15-0.45	0.78-2.1	9.525	16.5	4.76	1.2	○	
	VNMG 160404E-PB3	0.06-0.18	0.30-3.1	9.525	16.5	4.76	0.4	○	
	160408E-PB3	0.12-0.36	0.60-3.1	9.525	16.5	4.76	0.8	●	
	160412E-PB3	0.18-0.54	0.90-3.1	9.525	16.5	4.76	1.2	○	
	VNMG 160404E-PC3	0.07-0.20	0.34-3.3	9.525	16.5	4.76	0.4	○	
	160408E-PC3	0.14-0.40	0.68-3.3	9.525	16.5	4.76	0.8	○	
	160412E-PC3	0.20-0.60	1.02-3.3	9.525	16.5	4.76	1.2	○	
	VNMG 160404E-PD3	0.08-0.22	0.40-3.3	9.525	16.5	4.76	0.4	○	
	160408E-PD3	0.15-0.44	0.80-3.3	9.525	16.5	4.76	0.8	●	
	160412E-PD3	0.23-0.66	1.20-3.3	9.525	16.5	4.76	1.2	○	
	VNMG 160404E-PC4	0.09-0.24	0.48-3.3	9.525	16.5	4.76	0.4	○	
	160408E-PC4	0.18-0.48	0.96-3.3	9.525	16.5	4.76	0.8	○	
	160412E-PC4	0.26-0.72	1.44-3.3	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	○	
	WNMG 080404E-PB3	0.06-0.18	0.30-2.3	12.7	8.7	4.76	0.4	○	
	080408E-PB3	0.12-0.36	0.60-2.3	12.7	8.7	4.76	0.8	●	
	080412E-PB3	0.18-0.54	0.90-2.3	12.7	8.7	4.76	1.2	○	
	WNMG 080404E-PC3	0.07-0.20	0.34-2.6	12.7	8.7	4.76	0.4	○	
	080408E-PC3	0.14-0.40	0.68-2.6	12.7	8.7	4.76	0.8	○	
	080412E-PC3	0.20-0.60	1.02-2.6	12.7	8.7	4.76	1.2	○	
	WNMG 060408E-PD3	0.15-0.44	0.80-2.1	9.525	6.52	4.76	0.8	○	
	080404E-PD3	0.08-0.22	0.40-2.9	12.7	8.7	4.76	0.4	●	
	080408E-PD3	0.15-0.44	0.80-2.9	12.7	8.7	4.76	0.8	●	
	080412E-PD3	0.23-0.66	1.20-2.9	12.7	8.7	4.76	1.2	●	
	WNMG 080404E-PC4	0.08-0.22	0.40-2.9	12.7	8.7	4.76	0.4	○	
	080408E-PC4	0.15-0.44	0.80-2.9	12.7	8.7	4.76	0.8	○	
	080412E-PC4	0.23-0.66	1.20-2.9	12.7	8.7	4.76	1.2	○	
	WNMG 080408E-PD5	0.20-0.60	1.20-4.3	12.7	8.7	4.76	0.8	●	
	080412E-PD5	0.30-0.90	1.80-4.3	12.7	8.7	4.76	1.2	○	

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

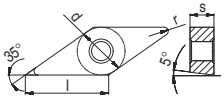
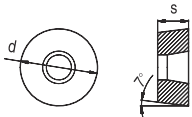
Positive insert

Insert	Item designation	Recommended cutting parameters		Dimension (mm)				Grade (CVD)	Geometry
		Feed (mm/rev)	Ap (mm)	d	l	s	r	AC200P	
	CCMT 060202E-PB1	0.02-0.07	0.15-1.6	6.35	6.45	2.38	0.2	○	
	060204E-PB1	0.04-0.14	0.30-1.6	6.35	6.45	2.38	0.4	○	
	060208E-PB1	0.09-0.28	0.60-1.6	6.35	6.45	2.38	0.8	○	
	09T302E-PB1	0.02-0.07	0.15-2.4	9.525	9.67	3.97	0.2	○	
	09T304E-PB1	0.04-0.14	0.30-2.4	9.525	9.67	3.97	0.4	○	
	09T308E-PB1	0.09-0.28	0.60-2.4	9.525	9.67	3.97	0.8	●	
	CCMT 060204E-PC2	0.05-0.16	0.35-1.9	6.35	6.45	2.38	0.4	○	
	060208E-PC2	0.10-0.32	0.70-1.9	6.35	6.45	2.38	0.8	○	
	09T304E-PC2	0.05-0.16	0.35-2.9	9.525	9.67	3.97	0.4	●	
	09T308E-PC2	0.10-0.32	0.70-2.9	9.525	9.67	3.97	0.8	●	
	120404E-PC2	0.05-0.16	0.35-3.9	12.7	12.9	4.76	0.4	○	
	120408E-PC2	0.10-0.32	0.70-3.9	12.7	12.9	4.76	0.8	○	
	120412E-PC2	0.16-0.48	1.05-3.9	12.7	12.89	4.76	1.2	○	
	CCMT 060204E-KC2	0.06-0.18	0.40-2.1	6.35	6.45	2.38	0.4	○	
	060208E-KC2	0.12-0.36	0.80-2.1	6.35	6.45	2.38	0.8	●	
	09T304E-KC2	0.06-0.18	0.40-3.2	9.525	9.67	3.97	0.4	●	
	09T308E-KC2	0.12-0.36	0.80-3.2	9.525	9.67	3.97	0.8	●	
	120404E-KC2	0.06-0.18	0.40-4.3	12.7	12.9	4.76	0.4	○	
	120408E-KC2	0.12-0.36	0.80-4.3	12.7	12.9	4.76	0.8	○	
	120412E-KC2	0.18-0.54	1.20-4.3	12.7	12.9	4.76	1.2	○	
	DCMT 070202E-PB1	0.02-0.07	0.15-1.5	6.35	7.75	2.38	0.2	○	
	070204E-PB1	0.04-0.14	0.30-1.5	6.35	7.75	2.38	0.4	○	
	11T302E-PB1	0.02-0.07	0.15-2.3	9.525	11.62	3.97	0.2	○	
	11T304E-PB1	0.04-0.14	0.30-2.3	9.525	11.62	3.97	0.4	○	
	11T308E-PB1	0.09-0.28	0.60-2.3	9.525	11.62	3.97	0.8	○	
	DCMT 070204E-PC2	0.05-0.16	0.35-2.1	6.35	7.75	2.38	0.4	○	
	070208E-PC2	0.10-0.32	0.70-2.1	6.35	7.75	2.38	0.8	○	
	11T304E-PC2	0.05-0.16	0.35-3.1	9.525	11.62	3.97	0.4	○	
	11T308E-PC2	0.10-0.32	0.70-3.1	9.525	11.62	3.97	0.8	●	
	11T312E-PC2	0.16-0.48	1.05-3.1	9.525	11.62	3.97	1.2	○	
	DCMT 070204E-KC2	0.06-0.18	0.40-2.3	6.35	7.75	2.38	0.4	○	
	070208E-KC2	0.12-0.36	0.80-2.3	6.35	7.75	2.38	0.8	○	
	11T304E-KC2	0.06-0.18	0.40-3.5	9.525	11.62	3.97	0.4	○	
	11T308E-KC2	0.12-0.36	0.80-3.5	9.525	11.62	3.97	0.8	○	
	11T312E-KC2	0.18-0.54	1.20-3.5	9.525	11.62	3.97	1.2	○	

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

Insert	Item designation	Recommended cutting parameters		Dimension (mm)				Grade (CVD)	Geometry
		Feed (mm/rev)	Ap (mm)	d	l	s	r	AC200P	
	SCMT 09T304E-PB1	0.04-0.14	0.30-2.4	9.525	9.525	3.97	0.4	○	
	09T308E-PB1	0.09-0.28	0.60-2.4	9.525	9.525	3.97	0.8	○	
	120404E-PB1	0.04-0.14	0.30-3.2	12.7	12.7	4.76	0.4	○	
	SCMT 09T304E-PC2	0.05-0.16	0.35-2.9	9.525	9.525	3.97	0.4	○	
	09T308E-PC2	0.10-0.32	0.70-2.9	9.525	9.525	3.97	0.8	○	
	120404E-PC2	0.05-0.16	0.35-3.8	12.7	12.7	4.76	0.4	○	
	120408E-PC2	0.10-0.32	0.70-3.8	12.7	12.7	4.76	0.8	○	
	120412E-PC2	0.16-0.48	1.05-3.8	12.7	12.7	4.76	1.2	○	
	SCMT 09T304E-KC2	0.06-0.18	0.40-3.1	9.525	9.525	3.97	0.4	○	
	09T308E-KC2	0.12-0.36	0.80-3.1	9.525	9.525	3.97	0.8	○	
	120404E-KC2	0.06-0.18	0.40-4.2	12.7	12.7	4.76	0.4	○	
	120408E-KC2	0.12-0.36	0.80-4.2	12.7	12.7	4.76	0.8	○	
	120412E-KC2	0.18-0.54	1.20-4.2	12.7	12.7	4.76	1.2	○	
	TCMT 090204E-PB1	0.04-0.14	0.30-1.9	5.56	9.63	2.38	0.4	○	
	110202E-PB1	0.02-0.07	0.15-2.2	6.35	11.0	2.38	0.2	○	
	110204E-PB1	0.04-0.14	0.30-2.2	6.35	11.0	2.38	0.4	○	
	110208E-PB1	0.09-0.28	0.60-2.2	6.35	11.0	2.38	0.8	○	
	16T304E-PB1	0.04-0.14	0.30-3.3	9.525	16.5	3.97	0.4	○	
	16T308E-PB1	0.09-0.28	0.60-3.3	9.525	16.5	3.97	0.8	○	
	TCMT 090204E-PC2	0.05-0.16	0.35-2.6	5.56	9.63	2.38	0.4	○	
	090208E-PC2	0.10-0.32	0.70-2.6	5.56	9.63	2.38	0.8	○	
	110204E-PC2	0.05-0.16	0.35-3.0	6.35	11.0	2.38	0.4	○	
	110208E-PC2	0.10-0.32	0.70-3.0	6.35	11.0	2.38	0.8	○	
	16T304E-PC2	0.05-0.16	0.35-4.5	9.525	16.5	3.97	0.4	○	
	16T308E-PC2	0.10-0.32	0.70-4.5	9.525	16.5	3.97	0.8	○	
	TPMT 090204E-PC2	0.05-0.16	0.35-2.6	5.56	9.63	2.38	0.4	●	
	090208E-PC2	0.10-0.32	0.70-2.6	5.56	9.63	2.38	0.8	○	
	110304E-PC2	0.05-0.16	0.35-3.0	6.35	11.0	3.97	0.4	○	
	110308E-PC2	0.10-0.32	0.70-3.0	6.35	11.0	3.97	0.8	○	
	TCMT 090204E-KC2	0.06-0.18	0.40-2.9	5.56	9.63	2.38	0.4	○	
	090208E-KC2	0.12-0.36	0.80-2.9	5.56	9.63	2.38	0.8	○	
	110204E-KC2	0.06-0.18	0.40-3.3	6.35	11.0	2.38	0.4	○	
	110208E-KC2	0.12-0.36	0.80-3.3	6.35	11.0	2.38	0.8	○	
	16T304E-KC2	0.06-0.18	0.40-4.9	9.525	16.5	3.97	0.4	○	
	16T308E-KC2	0.12-0.36	0.80-4.9	9.525	16.5	3.97	0.8	○	
	16T312E-KC2	0.18-0.54	1.20-4.9	9.525	16.5	3.97	1.2	○	

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

Insert	Item designation	Recommended cutting parameters		Dimension (mm)				Grade (CVD)	Geometry
		Feed (mm/rev)	Ap (mm)	d	l	s	r	AC200P	
	VBMT 110304E-PB1	0.04-0.14	0.30-1.4	6.35	11.07	3.18	0.4	○	
	110308E-PB1	0.09-0.28	0.60-1.4	6.35	11.07	3.18	0.8	○	
	160402E-PB1	0.02-0.07	0.15-2.1	9.525	16.61	4.76	0.2	○	
	160404E-PB1	0.04-0.14	0.30-2.1	9.525	16.61	4.76	0.4	●	
	160408E-PB1	0.09-0.28	0.60-2.1	9.525	16.61	4.76	0.8	●	
	VCMT 160404E-PB1	0.04-0.14	0.30-2.1	9.525	16.61	4.76	0.4	○	
	160408E-PB1	0.09-0.28	0.60-2.1	9.525	16.61	4.76	0.8	○	
	VBMT 110304E-PC2	0.05-0.16	0.35-2.1	6.35	11.07	3.18	0.4	○	
	110308E-PC2	0.10-0.32	0.70-2.1	6.35	11.07	3.18	0.8	○	
	160404E-PC2	0.05-0.16	0.35-3.1	9.525	16.61	4.76	0.4	●	
	160408E-PC2	0.10-0.32	0.70-3.1	9.525	16.61	4.76	0.8	●	
	160412E-PC2	0.16-0.48	1.05-3.1	9.525	16.61	4.76	1.2	●	
	VCMT 110304E-PC2	0.05-0.16	0.35-2.1	6.35	11.07	3.18	0.4	○	
	110308E-PC2	0.10-0.32	0.70-2.1	6.35	11.07	3.18	0.8	○	
	160404E-PC2	0.05-0.16	0.35-3.1	9.525	16.61	4.76	0.4	○	
	160408E-PC2	0.10-0.32	0.70-3.1	9.525	16.61	4.76	0.8	○	
	VBMT 160404E-KC2	0.06-0.18	0.40-3.3	9.525	16.61	4.76	0.4	●	
	160408E-KC2	0.12-0.36	0.80-3.3	9.525	16.61	4.76	0.8	●	
	160412E-KC2	0.18-0.54	1.20-3.3	9.525	16.61	4.76	1.2	●	
	RCMX 100300S	0.25-0.50	1.5-4.0	10	-	3.18	5	○	
	120400S	0.30-0.60	2.5-5.0	12	-	4.76	6	○	
	160600S	0.40-0.75	3.0-7.0	16	-	6.35	8	○	
	200600S	0.48-0.90	3.5-9.0	20	-	6.35	10	○	
	250700S	0.55-1.20	4.0-12.0	25	-	7.94	12.5	○	
	320900S	0.65-1.50	5.0-15.0	32	-	9.52	16	○	

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