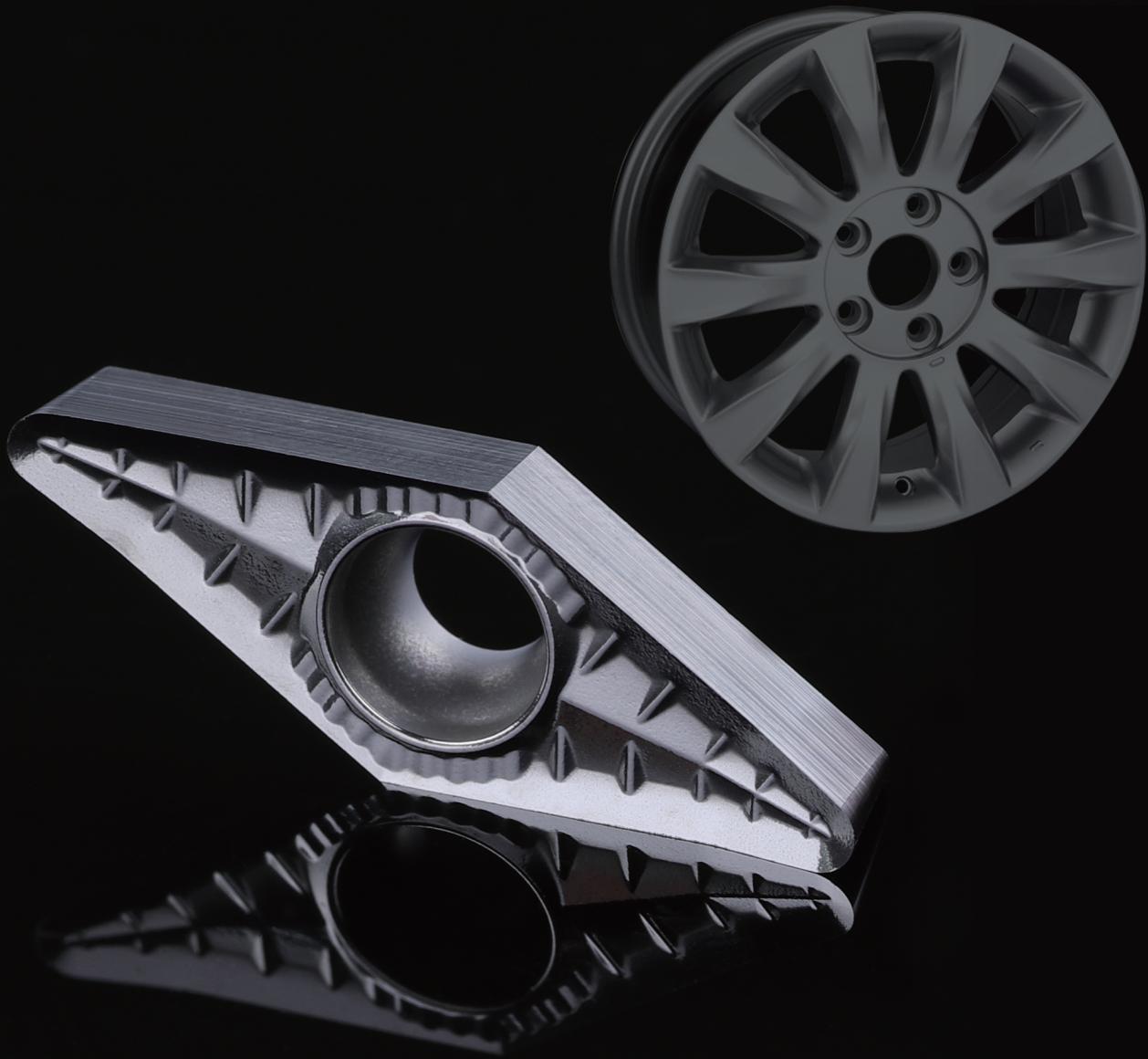


**NEW  
PRODUCT!**

# **AW100K**

**Uncoated grade for non-ferrous material**



Achtek is launching - a new uncoated carbide grade with a new chip breaker geometry. The new chip breaker which is called NC2 is a positive insert that is optimized chip breaker design for non-ferrous material. Especially it has a high positive rake angle applies minimized built up edge in machining on aluminum material and it can be very realized smooth cutting and low machining power.

In addition, the top surface of the insert is polished which can be increased longer tool life as well as less built up edge.

Inserts cutting edge has very sharp and it very suitable for small depth of cut and stable when high surface finish quality is required.

In case of new grade, it has developed to uncoated carbide grade which is called AW100K. It has high hardness and excellent wear resistance including toughness. AW100K grade is the best solution for aluminum material.

This grade is the best combination of NC2 chip breaker applies not only increases tool life but also improves surface finish and minimized burr on non-ferrous material, especially these products will be the best option to machine on aluminum material.

## ◆ AW100K Grade Feature

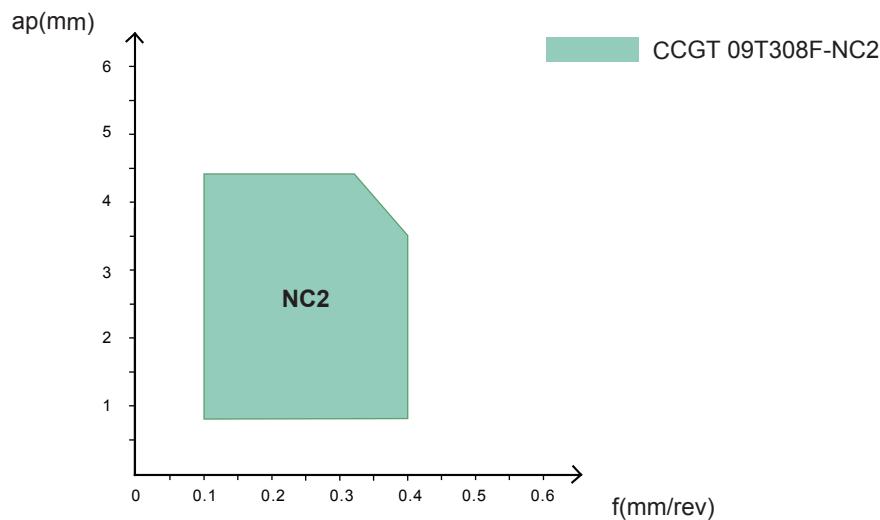
Uncoated grade  
ISO range: N05-N15



<SEM micro structure>

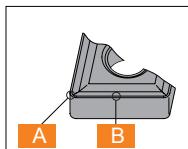
- ◆ High hardness and good toughness carbide uncoated grade
- ◆ General turning of non-ferrous materials such as aluminum and copper alloy
- ◆ Excellent wear resistance
- ◆ For high cutting speed on aluminum

## Chip breaker diagram



## Chip breaker Features

Positive insert



Chip breaker name	Edge preparation	Application
NC2		<ul style="list-style-type: none"><li>Optimized chip breaker design for excellent chip controlling</li><li>Very sharp positive rake angle</li><li>Inclined cutting edge applies very smooth cutting and low cutting force</li><li>Polished surface can be minimized built up edge and better surface finish</li><li>Positive insert</li><li>For finishing to semi-finishing</li><li>First choice for aluminum machining</li></ul>

## ► Recommended cutting speed by materials

Material	Silicon contents	Cutting speed(Vc: m/min)
Aluminum and aluminum alloys	<6%	200~950
Aluminum + Silicon	>6%	100~500

Note) The recommended cutting speed is for normal cutting conditions. The actual cutting speed could be adjusted based on real working condition by considering rigidity of the machine, fixation, and coolant.

## ► Case stories

Component description: Wheel

Material: Aluminum alloy (A3567)

Insert: VCGT 160412F-NC2 AW100K

Competitor: VCGT 160412

Cutting Parameters: Vc=600m/min, f=0.25mm/r, ap=0.8mm

Wet cutting

Operations: External , Face turning



Component description: Conductor

Material: Aluminum alloy

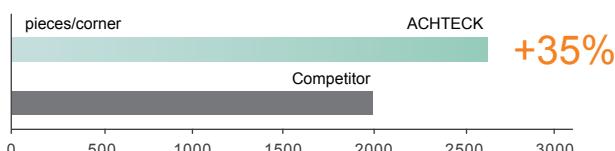
Insert: CCGT 09T304F-NC2 AW100K

Competitor: CCGX 09T304

Cutting Parameters: Vc=122m/min, f=0.25mm/r, ap=0.5mm

wet cutting

Operations: External turning, Continuous cut



## Stock items

Positive insert

Insert	Item designation	Recommended cutting parameters		Dimension(mm)				Uncoated AW100K	Geometry
		Feed (mm/rev)	ap (mm)	d	l	s	r		
	CCGT 060204F-NC2	0.05-0.20	0.32-2.9	6.35	6.45	2.38	0.4	●	
	09T302F-NC2	0.02-0.10	0.16-4.4	9.525	9.67	3.97	0.2	●	
	09T304F-NC2	0.05-0.20	0.32-4.4	9.525	9.67	3.97	0.4	●	
	09T308F-NC2	0.10-0.40	0.64-4.4	9.525	9.67	3.97	0.8	●	
	120404F-NC2	0.05-0.20	0.32-5.8	12.7	12.9	4.76	0.4	●	
	120408F-NC2	0.10-0.40	0.64-5.8	12.7	12.9	4.76	0.8	●	
	DCGT 070202F-NC2	0.02-0.10	0.16-3.5	6.35	7.75	2.38	0.2	●	
	070204F-NC2	0.05-0.20	0.32-3.5	6.35	7.75	2.38	0.4	●	
	11T302F-NC2	0.02-0.10	0.16-5.2	9.525	11.62	3.97	0.2	●	
	11T304F-NC2	0.05-0.20	0.32-5.2	9.525	11.62	3.97	0.4	●	
	11T308F-NC2	0.10-0.40	0.64-5.2	9.525	11.62	3.97	0.8	●	
	SCGT 09T308F-NC2	0.10-0.40	0.64-4.3	9.525	9.525	3.97	0.8	●	
	TCGT 110204F-NC2	0.05-0.20	0.32-5.0	6.35	11.0	2.38	0.4	●	
	16T304F-NC2	0.05-0.20	0.32-7.4	9.525	16.5	3.97	0.4	●	
	16T308F-NC2	0.10-0.40	0.64-7.4	9.525	16.5	3.97	0.8	●	
	VCGT 110302F-NC2	0.02-0.10	0.16-2.8	6.35	11.07	3.18	0.2	●	
	110304F-NC2	0.05-0.20	0.32-2.8	6.35	11.07	3.18	0.4	●	
	160404F-NC2	0.05-0.20	0.32-4.2	9.525	16.61	4.76	0.4	●	
	160408F-NC2	0.10-0.40	0.64-4.2	9.525	16.61	4.76	0.8	●	
	160412F-NC2	0.14-0.60	0.96-4.2	9.525	16.61	4.76	1.2	●	
	220530F-NC2	0.36-1.50	2.40-5.5	12.7	22.1	5.56	3.0	●	
	RCGT 0803MOF-NC2	0.10-1.00	0.70-3.3	8.0	-	3.18	4.0	○	
	1003MOF-NC2	0.20-1.30	0.90-4.0	10.0	-	3.18	5.0	○	
	10T3MOF-NC2	0.20-1.30	0.90-4.0	10.0	-	3.97	5.0	○	

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