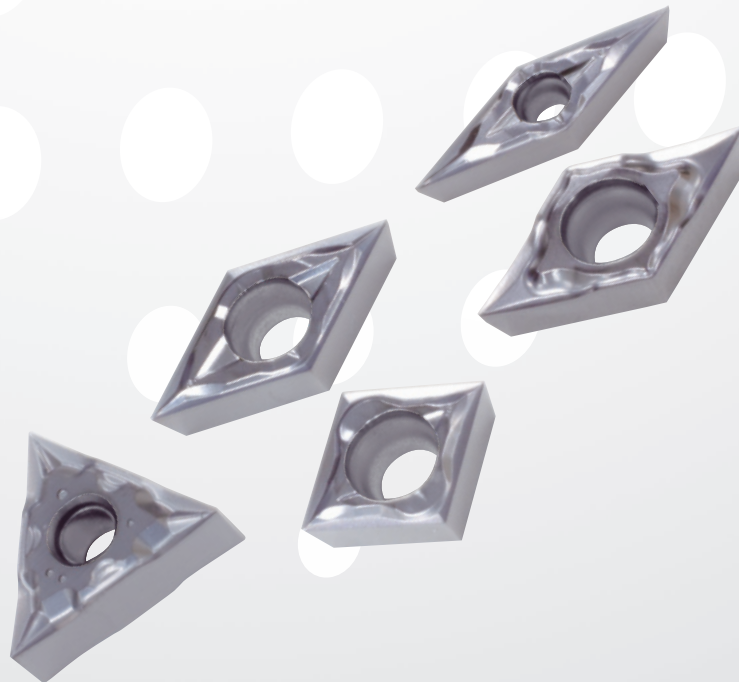
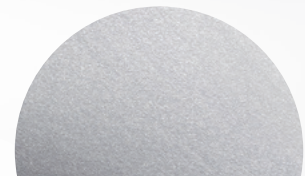


# NTK650

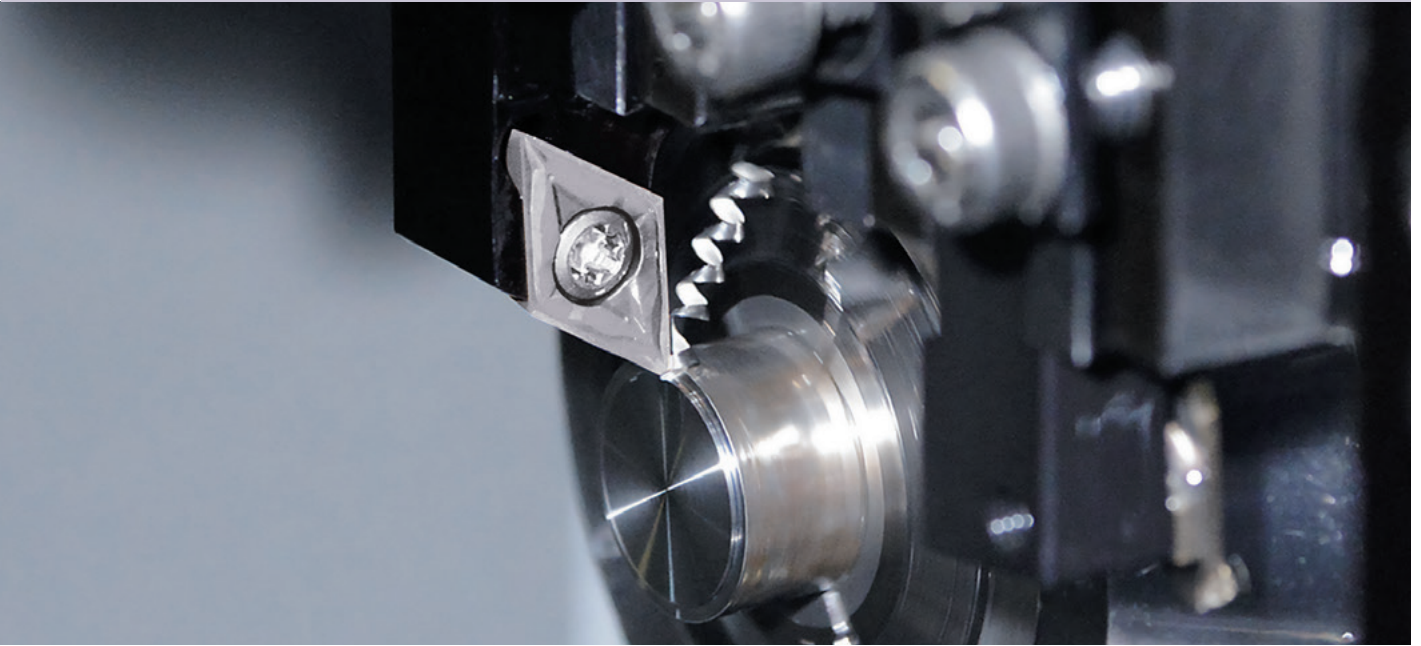
For small diameter parts | Materials for processing Ni-based alloys



Class S "dedicated" material, finally born



Specialized for  
Ni base alloys



**For more stable machining of small-diameter Ni based components**

**Common challenges in Ni-based alloy Machining: Edge damage and wear from welding.  
Discover stable machining with NTK's Innovative Material, 650.**

**New HiPIMS PVD grade**

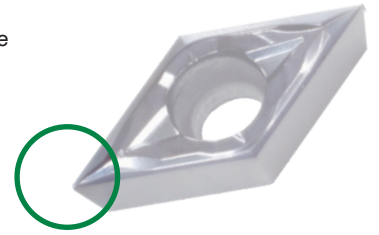
**NTK650**

**For small diameter parts | Materials for processing Ni-based alloys**

# Stable machining of [ Ni base alloys x small diameter parts ] for all users

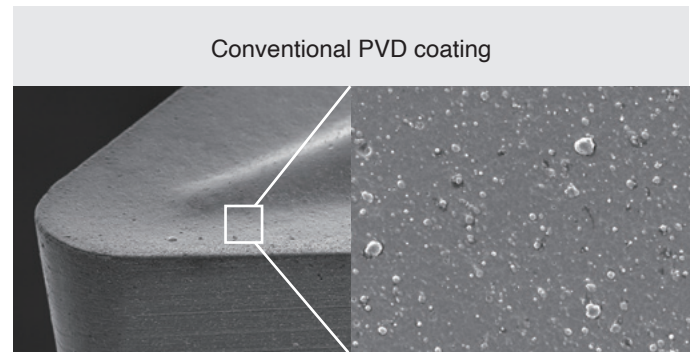
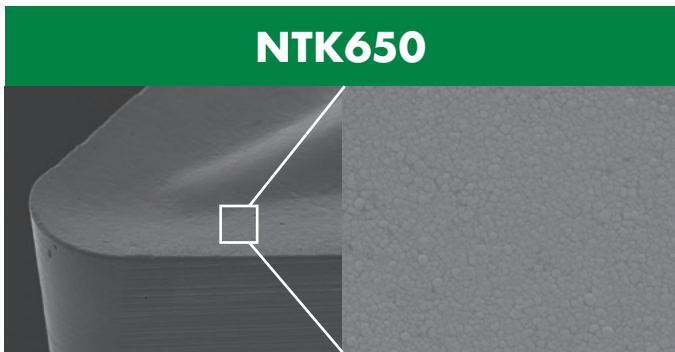
## Features

- **Adoption of new HiPIMS coating. Improvement of surface-smoothness and suppression of imperfections in film**  
Improves welding performance, which is critical to Ni base alloys. Provides stable machining
- **TiAlN system with excellent hardness and heat resistance achieves long life**  
Excellent wear resistance even in difficult-to-machine material processing with high cutting edge temperature



## Applicable Applications

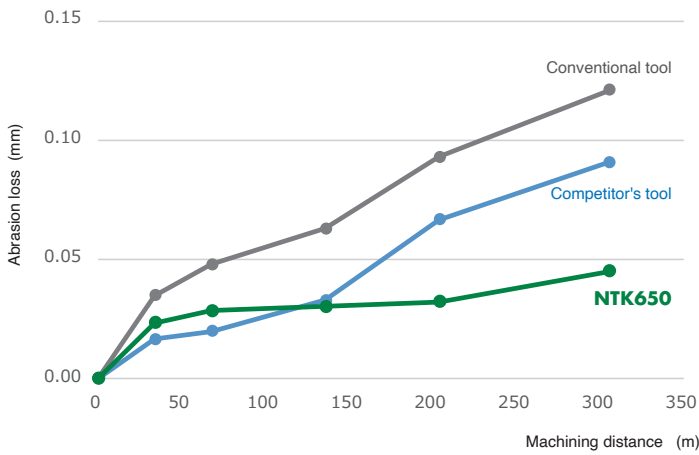
- Small diameter of Ni base alloys. (Approx.  $\Phi 20$ ) for best performance on workpieces
- Introducing three new types of NTK's best-selling chipbreakers



## Performance

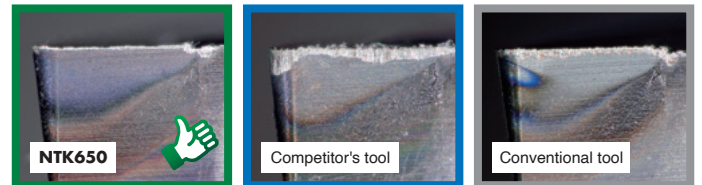
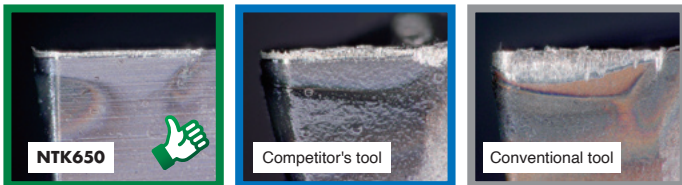
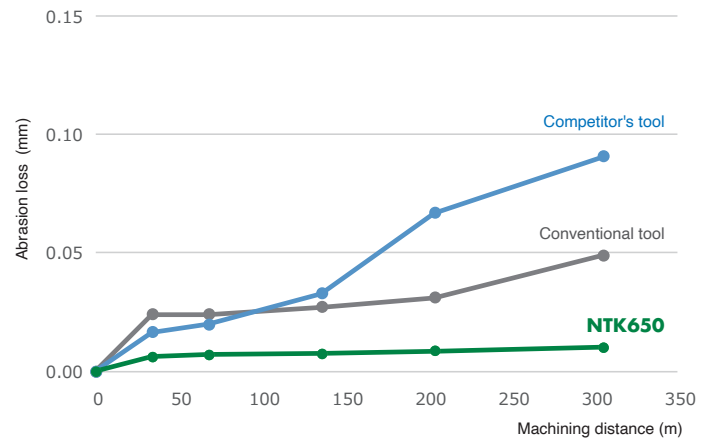
**Material: Inconel 718**

$V_c=50\text{m/min}$   $f=0.05\text{mm/rev}$   $a_p=1.0\text{mm}$  WET, DCGT11T302



**Material: Hastelloy C22**

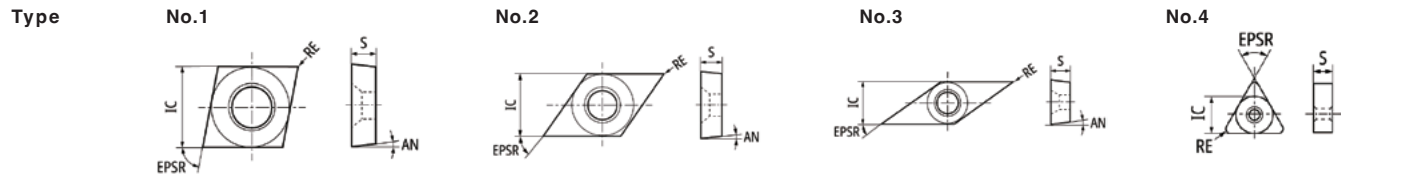
$V_c=80\text{m/min}$   $f=0.05\text{mm/rev}$   $a_p=1.0\text{mm}$  WET, DCGT11T302



## Cutting conditions

Grade	Work material	Cutting parameters		
		Cutting Speed (m/min)	Feed (mm/rev)	Depth of cut (mm)
NTK650	Inconel	30 - 60	0.03 - 0.07	0.5 - 1.5
	Hastelloy	50 - 100	0.03 - 0.07	0.5 - 1.5

# Lineup



Shape	Type	Product Number (Metric)	CECC	EPSR °	IC mm	S mm	AN °	RE mm	BS mm	Carbide 650 PVD
	1	CCGT09T301MYL	Sharp edges	80	9.525	3.97	7	0.08	-	●
	1	CCGT09T302MYL	Sharp edges	80	9.525	3.97	7	0.18	-	●
	1	CCGT09T304MYL	Sharp edges	80	9.525	3.97	7	0.38	-	●
	1	CCGT09T301MCL	Sharp edges	80	9.525	3.97	7	0.08	-	●
	1	CCGT09T302MCL	Sharp edges	80	9.525	3.97	7	0.18	-	●
	1	CCGT09T304MCL	Sharp edges	80	9.525	3.97	7	0.38	-	●
	2	DCGT11T301MYL	Sharp edges	55	9.525	3.97	7	0.08	-	●
	2	DCGT11T302MYL	Sharp edges	55	9.525	3.97	7	0.18	-	●
	2	DCGT11T304MYL	Sharp edges	55	9.525	3.97	7	0.38	-	●
	2	DCGT11T301MCL	Sharp edges	55	9.525	3.97	7	0.08	-	●
	2	DCGT11T302MCL	Sharp edges	55	9.525	3.97	7	0.18	-	●
	2	DCGT11T304MCL	Sharp edges	55	9.525	3.97	7	0.38	-	●
	3	VCGT110301MYL	Sharp edges	35	6.35	3.18	7	0.08	-	●
	3	VCGT110302MYL	Sharp edges	35	6.35	3.18	7	0.18	-	●
	3	VCGT110304MYL	Sharp edges	35	6.35	3.18	7	0.38	-	●
	3	VCGT110301MCL	Sharp edges	35	6.35	3.18	7	0.08	-	●
	3	VCGT110302MCL	Sharp edges	35	6.35	3.18	7	0.18	-	●
	4	TNGG160401MFNUL	Sharp edges	60	9.525	4.76	-	0.08	-	●
	4	TNGG160402MFNUL	Sharp edges	60	9.525	4.76	-	0.18	-	●
	4	TNGG160404MFNUL	Sharp edges	60	9.525	4.76	-	0.38	-	●

● : First recommendation  
○ : Second recommendation

Steel	○
Stainless steel	○
Cast Iron	
Nonferrous metals	
Heat-resistant alloy	●
High hardness material	
Others (non-metallic)	



**Tungaloy-NTK UK Limited**  
Gallan Park, Watling Street, Cannock, WS11 0XG, United Kingdom

Official Website [www.ntkcuttingtools.com/uk/](http://www.ntkcuttingtools.com/uk/)

LinkedIn [www.linkedin.com/company/ntk-cutting-tools-uk](http://www.linkedin.com/company/ntk-cutting-tools-uk)

Contact us [ntkcuttingtools@ngk.co.uk](mailto:ntkcuttingtools@ngk.co.uk)

