

GrooveLine



TUNGCUT

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Tungaloy Report No. 391S2-US

Expanded lineup with **AH8005** and **KS05F** grade inserts for HRSA and DGS geometry with **0.002" or 0.004" (0.05 or 0.1 mm) corner radii**



INDUSTRY 4.0
FEED the SPEED!



For more information

New AH8005

Incredible reliability in grooving of heat-resistant alloys

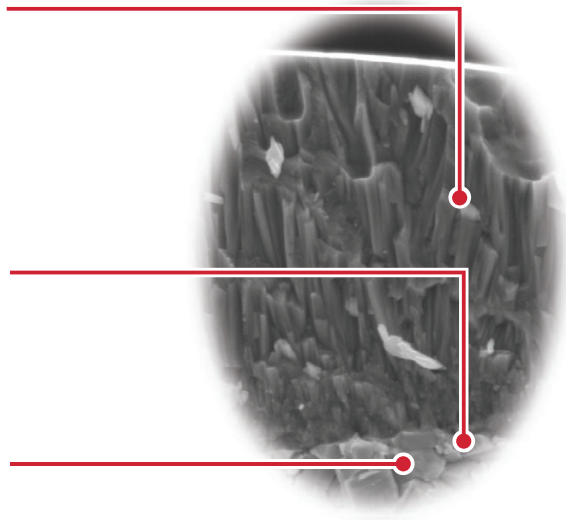
■ Nano-multi-layered AlTiN coating with high Al content

- Increases hardness by 20%
- Prevents micro cracks from developing
- Long tool life & stable machining

■ Improved adhesion strength

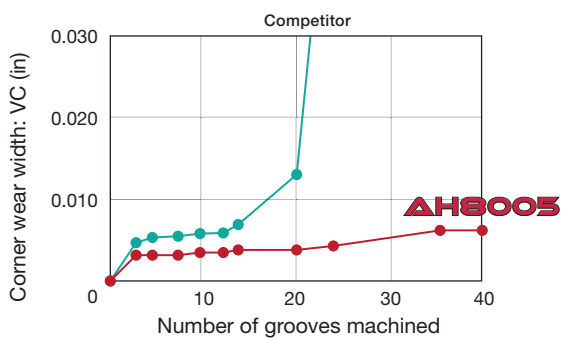
Prevents notch wear that tends to occur in machining heat-resistant alloys

■ Newly developed substrates

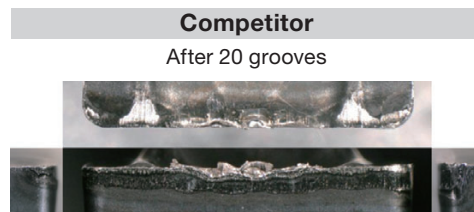


CUTTING PERFORMANCE

S Inconel718

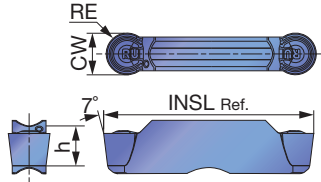


Cutting speed : $V_c = 197$ sfm
 Feed : $f = 0.002$ ipr
 Groove width : $CW = 0.197$ "
 Depth of cut : $a_p = 50.197$ "
 Machining : External grooving
 Coolant : Wet (7MPa)



DTR

Profiling and undercutting



P Steel	★	★	☆	☆		☆			★				
M Stainless		★	☆	☆		★							
K Cast iron		★		☆	☆	☆			☆		☆		
N Non-ferrous											☆		
S Superalloys		★	☆	★	★						★		
H Hard materials													

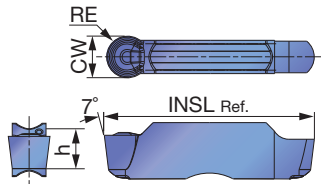
★ : First choice
☆ : Second choice

Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated						Cermet	Uncoated	INSL (in)	h (in)	
					T9225	AH7025	AH725	AH8005	AH905	GH130	NS9530	KS05F			
DTR3-150	3	3	0.118	0.059	●	●	●	●	●	●	●	●	●	0.787	0.197
DTR4-200	4	4	0.157	0.079	●	●	●	●	●	●	●	●	●	0.787	0.197
DTR5-250	5	5	0.197	0.098	●	●	●	●	●	●	●	●	●	0.984	0.217
DTR6-300	6	6	0.236	0.118	●	●	●	●	●	●	●	●	●	0.984	0.217
DTR8-400	8	8	0.315	0.157	●	●	●	●	●	●	●	●	●	1.181	0.264

● : New
● : Line up

STR

Profiling and undercutting, 1 corner



P Steel	★	☆											
M Stainless	★	☆											
K Cast iron	★	☆							☆				
N Non-ferrous									☆				
S Superalloys	★	★							★				
H Hard materials													

★ : First choice
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Designation	Seat size	CW±0.05 (mm)	CW±0.002 (in)	RE (in)	Coated				Uncoated	INSL (in)	h (in)
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STR3-150	3	3	0.118	0.059	●	●			●	0.787	0.197
STR4-200	4	4	0.157	0.079	●	●			●	0.787	0.197
STR5-250	5	5	0.197	0.098	●	●			●	0.984	0.217
STR6-300	6	6	0.236	0.118	●	●			●	0.984	0.217
STR8-400	8	8	0.315	0.157	●	●			●	1.181	0.264

● : New

STANDARD CUTTING CONDITIONS

ISO	Workpiece material	Hardness	Priority	Grade	Cutting Speed Vc (sfm)
P	Steel 1045, 4135, etc.	< 300 HB	First choice	AH7025, AH725	164 - 591
		< 300 HB	Wear resistance	T9225, AH8005	262 - 984
		< 300 HB	Impact resistance	GH130	164 - 394
		< 300 HB	Surface quality	NS9530	262 - 722
M	Stainless steel 304SS, 316SS, 17-4 PH, etc.	< 200 HB	First choice	AH7025, AH725	164 - 394
		< 200 HB	Wear resistance	AH8005	164 - 394
		< 200 HB	Impact resistance	GH130	164 - 394
K	Gray cast iron Class 25, Class 30, etc.	-	First choice	T515, AH7025	164 - 591
		-	Impact resistance	GH130	164 - 591
	Ductile cast iron 60-40-18, 80-55-06, etc.	-	First choice	T515, AH7025	164 - 394
		-	Impact resistance	GH130	164 - 394
N	Aluminum alloys Si < 12%	-	First choice	TH10	328 - 1640
		-	First choice	KS05F	328 - 1969
S	Superalloys Inconel718, etc.	< HRC 40	First choice	AH8005	66 - 262
		< HRC 40	Impact resistance	AH7025, AH725	66 - 197
	Titanium alloys Ti-6Al-4V, etc.	< HRC 40	First choice	KS05F	66 - 262
		< HRC 40	Impact resistance	AH7025, AH725	66 - 262
H	Hardened steel 4137, etc.	> HRC 50	First choice	BX360	262 - 492

Tungaloy America, Inc.

3726 N Ventura Drive, Arlington Heights, IL 60004, U.S.A.

Inside Sales: +1-888-554-8394

Technical Support: +1-888-554-8391

Fax: +1-888-554-8392

www.tungaloy.com/us

Tungaloy Canada

432 Elgin St. Unit 3, Brantford, Ontario N3S 7P7, Canada

Phone: +1-519-758-5779 Fax: +1-519-758-5791

www.tungaloy.com/ca

Tungaloy de Mexico S.A.

C Los Arellano 113, Parque Industrial Siglo XXI

Aguascalientes, AGS, Mexico 20290

Phone:+52-449-929-5410 Fax:+52-449-929-5411

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