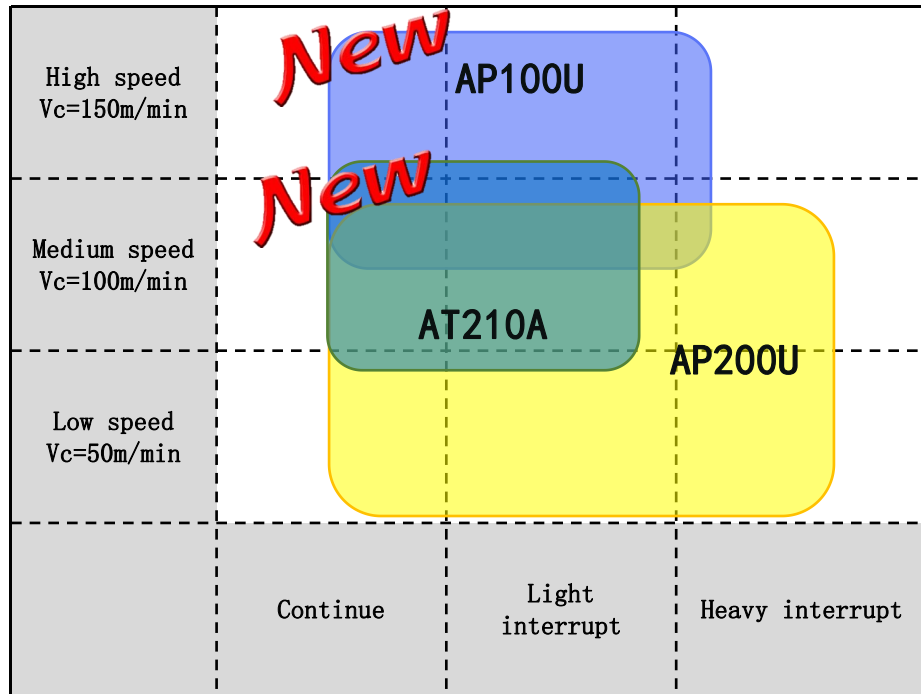


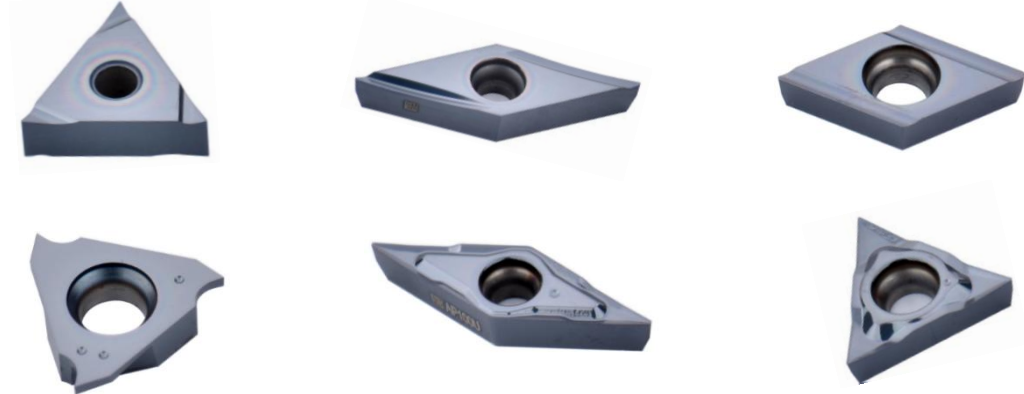
Small part cutting tool Grade

AP100U

AP100U Precision cutting



Steel (carbon steel、soft steel)



P05~P20

Recommendation cutting speed for steel **70-200**m/min

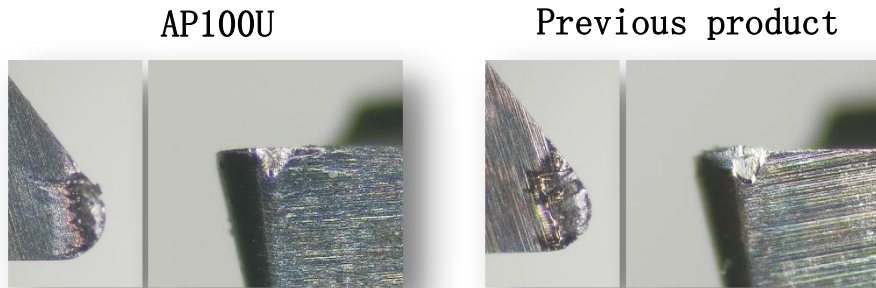


M05~M20

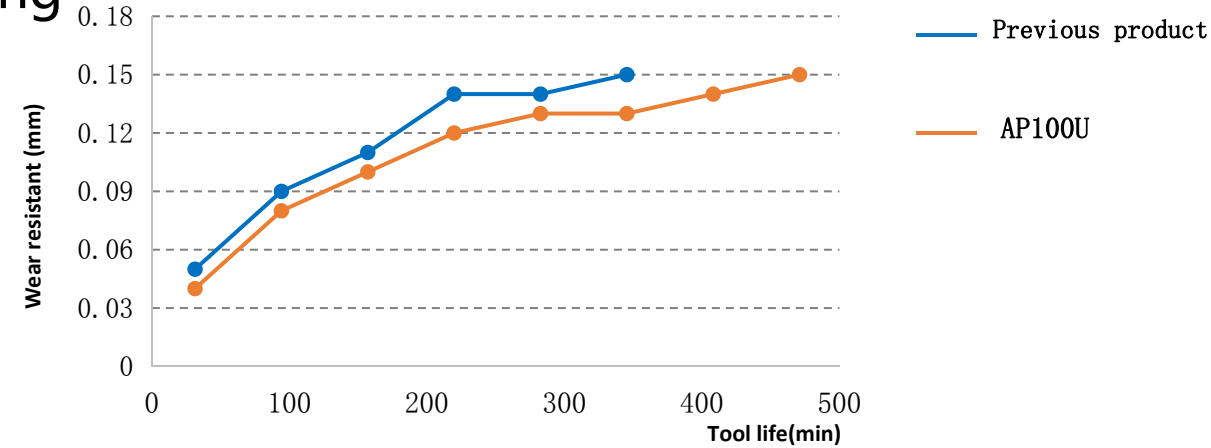
Recommendation cutting speed for stainless steel **60-180**m/min

Wear comparison report

Wear comparison of external continue turning



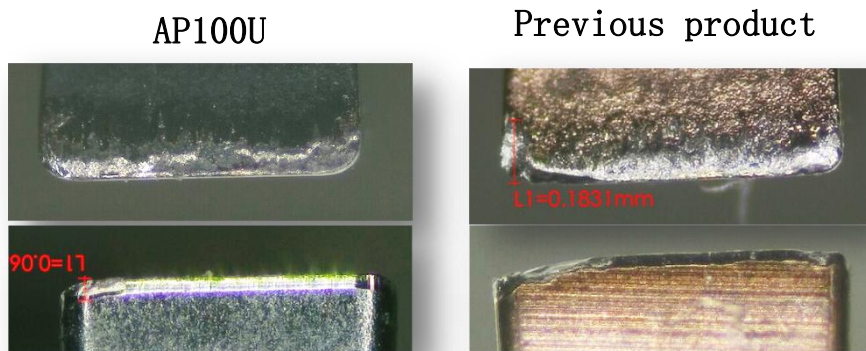
Tool life: 157min



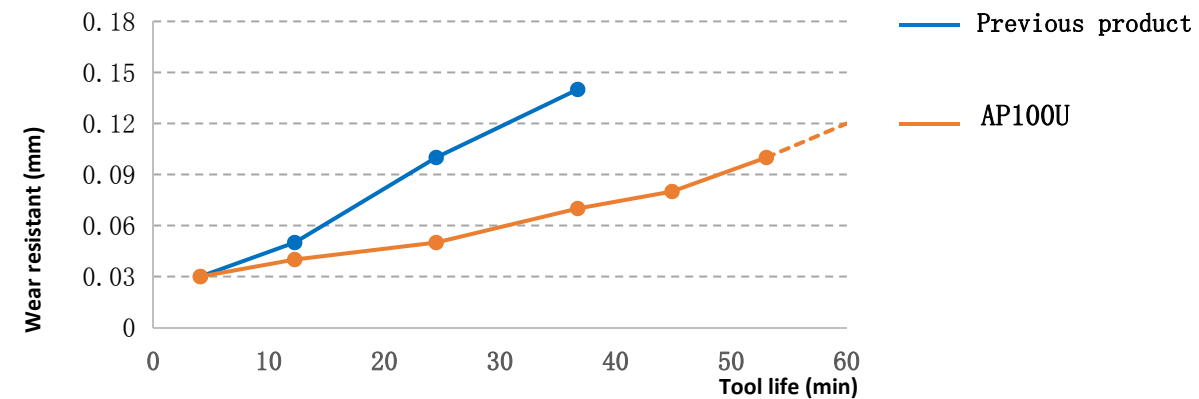
Insert : DCET 11T302FR-F AP100U

Cutting materials: 4140, $V_c=120\text{m/min}$, $a_p=0.3\text{mm}$, $f=0.05\text{mm/rev}$, wet

Wear comparison of external grooving



Tool life: 36min



Insert : ASG 32R100T20-R010 AP100U

Cutting materials: 4140, $V_c=120\text{m/min}$, $a_p=1.5\text{mm}$, $f=0.03\text{mm/rev}$, wet

Field report 1 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss machine tool	
Workpiece	Pin (45# Steel)	
Tool holder	KTGF1212JX-16F	KTGF1212JX-16F
Insert	TGF 32R200-010 PR**0	ASG 32R200T25-R010 AP100U
Chipbreaker		
Working condition	Grooving	Grooving
Vc(m/min)	72.22	72.22
f(mm/rev)	1.5	1.5
ap(mm)	0.03	0.03
Coolant	Emulsion	Emulsion
Tool life (pcs)	900	1200
Conclusion	Success: The Tool life is increased by 33% under the same parameters.	



Field report 2 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss machine tool	
Workpiece	Shaft (304F)	
Tool holder		
Insert	DCGT 11T302 -ML FJ**5-1	DCET 11T302FR-F AP100U
Chipbreaker	ML	F
Working condition	External Turning	External Turning
Vc(m/min)	56.5	56.5
f(mm/rev)	0.75	0.75
ap(mm)	0.04	0.04
Coolant	Emulsion	Emulsion
Tool life (pcs)	2000	2156
Conclusion	Success: The Tool life is increased by 0.08% under the same parameters.	



Field report 3 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss machine tool TSUGAMI B0206	
Workpiece	Shaft (SAE1144)	
Tool holder		
Insert	DCGT 11T302R-F PR**0	DCET 11T302FR-F AP100U
Chipbreaker	F	F
Working condition	External Turning	External Turning
Vc(m/min)	160	160
f(mm/rev)	0.2	0.2
ap(mm)	0.1	0.1
Coolant	External cooling	External cooling
Tool life (pcs)	400	400
Conclusion	Under the same working conditions, the tool life was the same as the competitor's, while the unit price was lower. The test was successful.	

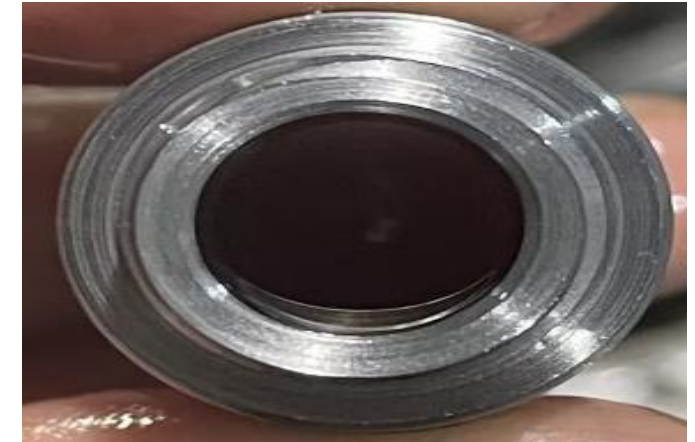


Field report 4 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss machine tool Citizen L32	
Workpiece	Housing (C12L14)	
Tool holder		
Insert	DCET11T302MR-F TN**0	DCET11T302FR-F AP100U
Chipbreaker	F	F
Working condition	External Turning	External Turning
Vc(m/min)	120	120
f(mm/rev)	0.5	0.5
ap(mm)	0.035	0.035
Coolant	Oil	Oil
Tool life (pcs)	100	100
Conclusion	Under the same working conditions, the tool life was the same as the competitor's, while the unit price was lower. The test was successful.	

Field report 5 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss machine tool Citizen A20	
Workpiece	1215MS	
Tool holder		
Insert	DCGT11T302FN-JS SH**5	DCGT 11T302E-UF AP100U
Chipbreaker	JS	UF
Working condition	Face turning	Face turning
Vc(m/min)	208	208
f(mm/rev)	0.2	0.2
ap(mm)	0.1	0.1
Coolant	Oil	Oil
Tool life (pcs)	3062	3257
Conclusion	Success: The Tool life is increased by 0.06% under the same parameters.	

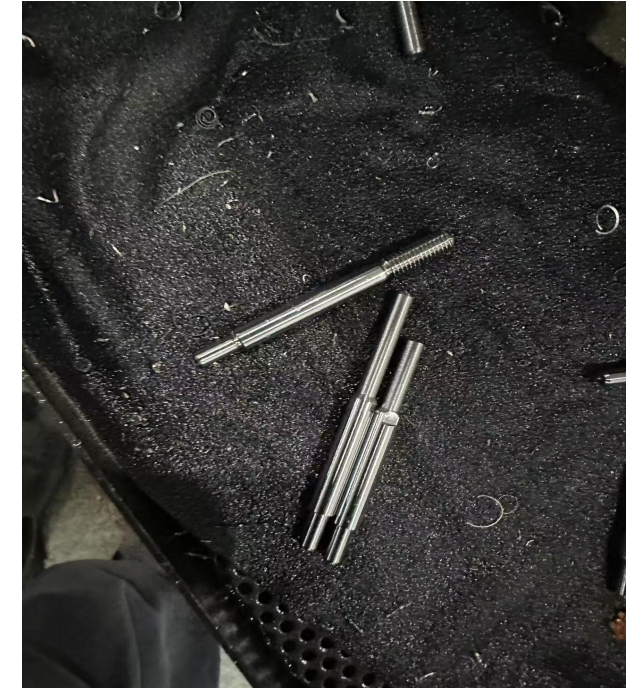


Field report 6 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss machine tool TSUGAMI BO205-III	
Workpiece	Shaft (16MnCr5)	
Tool holder		
Insert	DCGT110302FN-JS HS**5	DCGT 11T302E-UF AP100U
Chipbreaker	JS	UF
Working condition	External Turning	External Turning
Vc(m/min)	124	124
f(mm/rev)	0.5	0.5
ap(mm)	0.08	0.08
Coolant	External cooling	External cooling
Tool life (pcs)	1500	1700
Conclusion	Success: The Tool life is increased by 13% under the same parameters.	

Field report 7 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss machine tool TSUGAMI	
Workpiece	Piston bar (S45C)	
Tool holder		
Insert	DCGT 11T304MFP-SKS PR1**5	DCGT 11T304FP-UF AP100U
Chipbreaker	SKS	UF
Working condition	External Turning	External Turning
Vc(m/min)	80	80
f(mm/rev)	3	3
ap(mm)	0.05	0.05
Coolant	Oil	Oil
Tool life (pcs)	400	500
Conclusion	Success: The Tool life is increased by 25% under the same parameters.	



Field report 8 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Vertical lathe	
Workpiece	Turbine housing (Stainless steel)	
Tool holder		
Insert	DCGT 11T304F-UF AP3**M	DCGT 11T304F-UF AP100U
Chipbreaker	UF	UF
Working condition	Finishing	Finishing
Vc(m/min)	77	77
f(mm/rev)	0.2	0.2
ap(mm)	0.11	0.11
Coolant	Emulsion	Emulsion
Tool life (pcs)	30	35
Conclusion	Success: The Tool life is increased by 17% under the same parameters.	

Field report 9 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Horizontal lathe	
Workpiece	Stainless steel	
Tool holder		
Insert	TNGG 160402-AL PM**0	TNGG 160402FR-F AP100U
Chipbreaker	AL	F
Working condition	Finishing	Finishing
Vc(m/min)	203	203
f(mm/rev)	0.5	0.5
ap(mm)	0.03	0.03
Coolant	Emulsion	Emulsion
Tool life (pcs)	600	600
Conclusion	Under the same working conditions, the tool life was the same as the competitor's, while the unit price was lower. The test was successful.	

Field report 10 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss machine tool	
Workpiece	Pin (45# Steel)	
Tool holder		
Insert	TNGG 160402R-S PR1**5	TNGG 160402FR-F AP100U
Chipbreaker	S	F
Working condition	Finishing	Finishing
Vc(m/min)	106	106
f(mm/rev)	0.1	0.1
ap(mm)	0.04	0.04
Coolant	Emulsion	Emulsion
Tool life (pcs)	600	1200
Conclusion	Success: The Tool life is increased by 100% under the same parameters.	

Field report 11 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Star SB20R	
Workpiece	Worm (35# Steel)	
Tool holder		
Insert	TNGG 160402 ZY1**0	TNGG 160402FR-F AP100U
Chipbreaker		F
Working condition	Finishing	Finishing
Vc(m/min)	150	150
f(mm/rev)	0.2	0.2
ap(mm)	0.1	0.1
Coolant	External cooling	External cooling
Tool life (pcs)	1500	1500
Conclusion	Under the same working conditions, the tool life was the same as the competitor's, while the unit price was lower. The test was successful.	



Field report 12 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss machine tool	
Workpiece	Shaft (Steel)	
Tool holder		
Insert	ABS15R4005 PR**0	ABF 07R280005-FR AP100U
Chipbreaker		FR
Working condition	Back turning	Back turning
Vc(m/min)	100	100
f(mm/rev)	1	1
ap(mm)	0.05	0.05
Coolant	Emulsion	Emulsion
Tool life (pcs)	2000	2000
Conclusion	Under the same working conditions, the tool life was the same as the competitor's, while the unit price was lower. The test was successful.	

Field report 13 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Citizen Lathe L12VII	
Workpiece	Output shaft	
Tool holder	SABSR1010K-40F	SABSR1010K-40F
Insert	Local	ABF 07R280020-FR AP100U
Chipbreaker		FR
Working condition	Back turning	Back turning
Vc(m/min)	55	55
f(mm/rev)	0.5	0.5
ap(mm)	0.02	0.02
Coolant	Emulsion	Emulsion
Tool life (pcs)	1500	1700
Conclusion	Success: The Tool life is increased by 13% under the same parameters.	

Field report 14 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Swiss lathe	
Workpiece	304	
Tool holder	SVJBR2525M-16N	SVJBR2525M-16N
Insert	VBGT160402R-Y	VBET 160402FR-Y AP100U
Chipbreaker	Y	Y
Working condition	Finishing	Finishing
Vc(m/min)	107	107
f(mm/rev)	0.2	0.2
ap(mm)	1.5	1.5
Coolant	Emulsion	Emulsion
Tool life (pcs)	35	42
Conclusion	Successful, Tool life increase 20%.	



Field report 15 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Star SB20	
Workpiece	Pushing rod (303Cu)	
Tool holder	KTGF1212JX-16F	KTGF1212JX-16F
Insert	TGF 32R125-010	ASG 32R125T20-R010 AP100U
Chipbreaker		
Working condition	Grooving	Grooving
Vc(m/min)	30	72
f(mm/rev)	0.05	0.03
ap(mm)	1	1.5
Coolant	Emulsion	Emulsion
Tool life (pcs)	600	600
Conclusion	Successful.Under the same working conditions, the tool life was the same as the competitor's, while the unit price was lower. The test was successful.	

Field report 16 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Tsugami B0206	
Workpiece	Drive block (45#)	
Tool holder		
Insert	DCGT 11T304N YL	DCET 11T304E-UM AP100U
Chipbreaker	YL	UM
Working condition	Finishing	Finishing
Vc(m/min)	195	195
f(mm/rev)	0.04	0.04
ap(mm)	0.2	0.2
Coolant	Emulsion	Emulsion
Tool life (pcs)	60	195
Conclusion	Successful, tool life increase 225%.	



Field report 17 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Tsugami 202	
Workpiece	(45#)	
Tool holder		
Insert	DCGT 11T302FN-JS	DCGT 11T302E-UF AP100U
Chipbreaker	JS	UF
Working condition	Finishing	Finishing
Vc(m/min)	145	145
f(mm/rev)	0.05	0.05
ap(mm)	0.15	0.15
Coolant	Emulsion	Emulsion
Tool life (pcs)	3000	3000
Conclusion	Successful.Under the same working conditions, the tool life was the same as the competitor's, while the unit price was lower. The test was successful.	

Field report 18 - AP100U

Brand	Other brand	ACHTECK
Machine tool	Citizen Swiss lathe	
Workpiece	Shaft (1215MS)	
Tool holder	WTENN2525M16	WTENN2525M16
Insert	TNGG160402R-S	TNGG 160402FR-F AP100U
Chipbreaker	S	F
Working condition	Finishing	Finishing
Vc(m/min)	273	273
f(mm/rev)	0.18	0.18
ap(mm)	0.1	0.1
Coolant	Emulsion	Emulsion
Tool life (pcs)	120	200
Conclusion	Successful. Tool life increase 67%.	

