



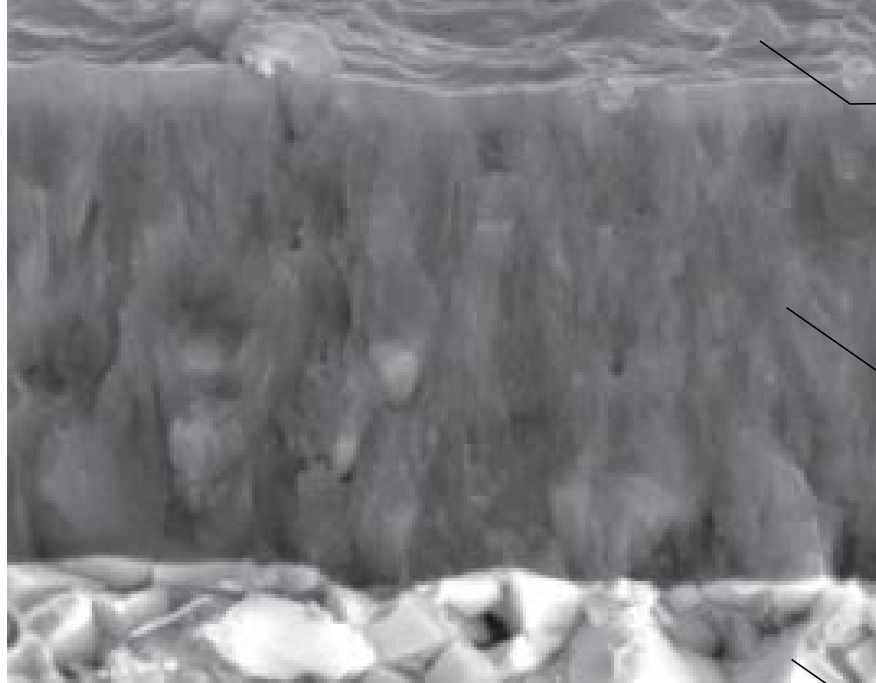
# Milling insert Grade

AP153H

THE EXPERT OF DIFFICULT MACHINING



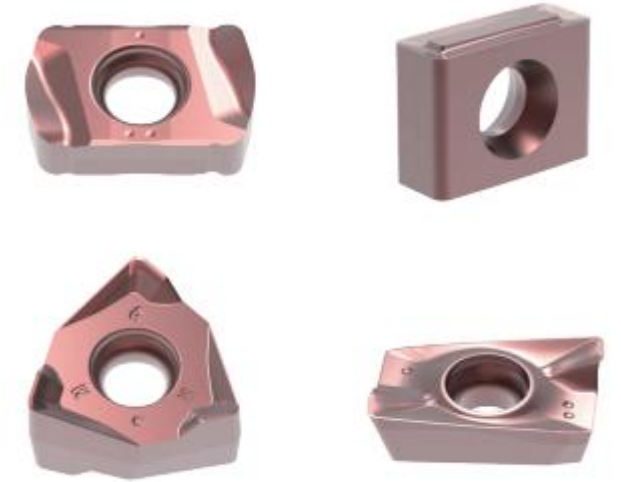
# AP153H Specification



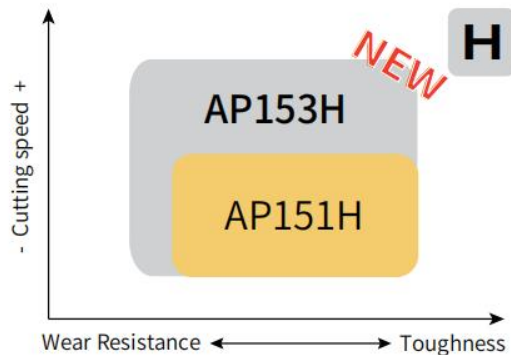
Smooth coating surface, reduce cutting force.

Nano-multilayer gradient coating design provides resistance to chipping and crack propagation, while enhancing adhesion to the substrate.

Sub-micron hard alloy grain structure, high hardness, and high wear resistance substrate.



## Application area



Material	H								K							
Application	Finishing				Roughing				Finishing				Roughing			
ISO	H05	H10	H15	H20	H25	H30	H40	H50	K05	K10	K15	K20	K25	K30	K40	K50
<b>H</b>	AP153H								AP153H							
Vc	40-55HRC: 30-100m/min 55-62HRC: 20-80m/min								100-300m/min							



# AP153H Wear resistant

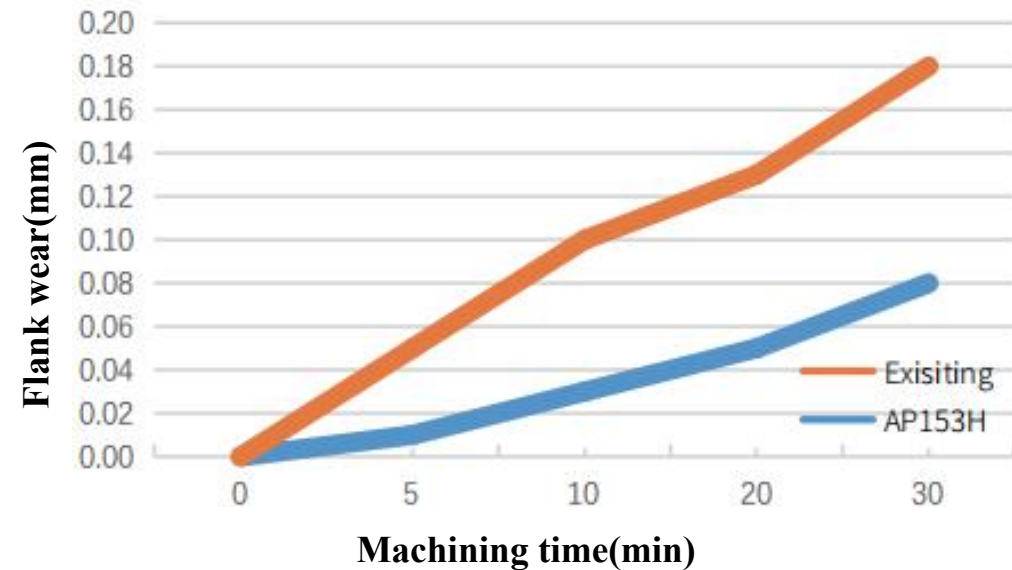


AP153H



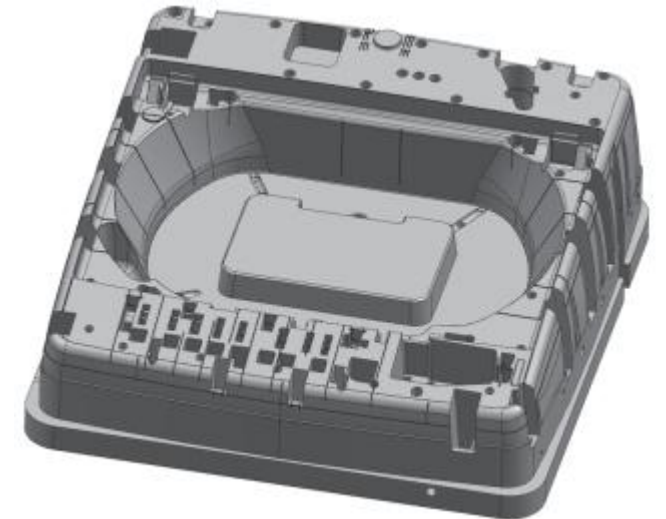
Existing

- **Material:** SKD61
- **Material Hardness :** 60 HRC
- **Cutter:** ASM90-032-Z03-C32-AP16-L150
- **Insert:** APMT 1604PDER AP153H
- **Cutting Parameter:**  $V_c=80\text{m/min}$ ,  $a_p=1.0\text{mm}$ ,  $f_z=0.15\text{mm}$
- **Coolant:** Wet



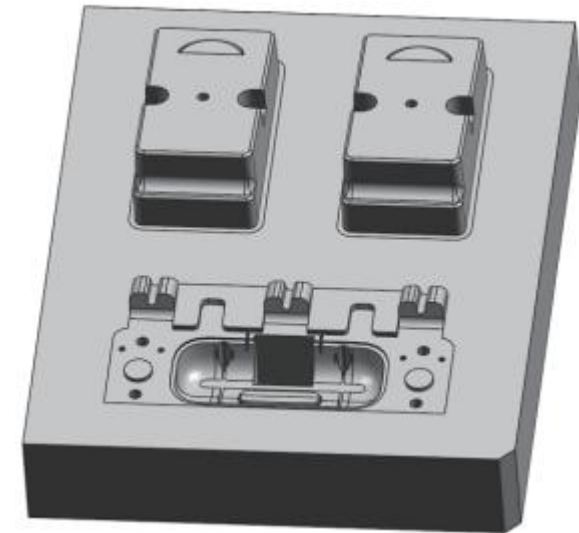
# Field report 1-AP153H

Brand	Other brand	ACHTECK
Machine tool	Vertical machine tool	
Workpiece material	SKD61(HRC 55)	
Cutter	D63-Z05	D63-Z05
Insert	RPMW 10T3MOE AP151H	RPMW 10T3MOE AP153H
Chipbreaker		
Working condition	Rough face milling	Rough face milling
Vc(m/min)	50	50
f(mm/z)	0.4	0.4
ap(mm)	0.3	0.3
ae(mm)	30	30
Coolant	WET	WET
Tool life ( min )	63	80
Conclusion	Successful: Compared to the previous grade, the new grade offers a 27% longer service life.	



# Field report 2-AP153H

Brand	Other brand	ACHTECK
Machine tool	Vertical machine tool	
Workpiece material	Cr12MoV (62 HRC)	
Cutter	D32-Z03	D32-Z03
Insert	APMT 1604PDER AP151H	APMT 1604PDER AP153H
Chipbreaker		
Working condition	Rough face milling	Rough face milling
Vc(m/min)	60	60
f(mm/z)	0.2	0.2
ap(mm)	0.2	0.2
ap(mm)	20	20
Coolant	WET	WET
Tool life ( min )	30	40
Conclusion	Successful: Compared to the previous grade, the new grade offers a 33% longer service life.	





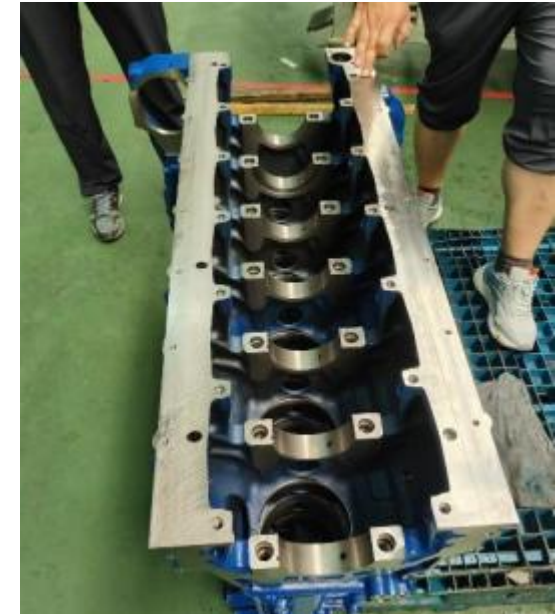
# Field report 3-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece material	SKD11 (HRC 60-62)	
Cutter		
Insert	APMT 1604PDER-HH GS1**5	APMT 1604PDER AP153H
Chipbreaker	HH	
Working condition	Shoulder milling	Shoulder milling
Vc(m/min)	80	80
f(mm/z)	0.15	0.15
ap(mm)	0.5-1	0.5-1
Coolant	Emulsion	Emulsion
Tool life ( min )	120	120
Conclusion	Successful: Under the same parameters, ACHTECK matches the service life of other brands, but with better cost performance and greater customer satisfaction.	

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# Field report 4-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	vermicular graphite cast iron 450 (HRC 27)	
Cutter	D210	D210
Insert	LNHQ 150416FN-W	LNHQ 150416FN-W AP153H
Chipbreaker		
Working condition	Face milling	Face milling
Vc(m/min)	150	150
f(mm/z)	0.14	0.14
ap(mm)	1	1
Coolant	Emulsion	Emulsion
Tool life ( pcs )	115	115
Conclusion	Successful: Under the same parameters, ACHTECK matches the service life of other brands, but with better cost performance and greater customer satisfaction.	





# Field report 5-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	Mold steel (HRC 62)	
Cutter		
Insert	RDHX 1003MOT DH1*3	RPMW 10T3MOE-HR2 AP153H
Chipbreaker		HR2
Working condition	Profiling	Profiling
Vc(m/min)	72	72
f(mm/z)	0.5	0.5
ap(mm)	0.2	0.2
Coolant	Emulsion	Emulsion
Tool life ( pcs )	Half	1 puls
Conclusion	Successful: Compared to other brands, ACHTECK delivers 100% longer service life – ensuring customer satisfaction.	

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# Field report 6-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	Wear-resistant electrode (HRC 55-60)	
Cutter		
Insert	RDMW 1204MOE JC5**3	RDMW 1204MOE AP153H
Chipbreaker		HR2
Working condition	Profiling	Profiling
Vc(m/min)	150	150
f(mm/z)	0.3	0.3
ap(mm)	0.3	0.3
Coolant	Emulsion	Emulsion
Tool life ( min )	60	60
Conclusion	Successful: Under the same parameters, ACHTECK matches the service life of other brands, but with better cost performance and greater customer satisfaction.	

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# Field report 7-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	40Co (HRC 37)	
Cutter		
Insert	RDMT 1204-M-C DP5**0	RDMT 1204MOE AP153H
Chipbreaker	C	
Working condition	Profiling	Profiling
Vc(m/min)	150	150
f(mm/z)	0.3	0.3
ap(mm)	0.3	0.3
Coolant	Emulsion	Emulsion
Tool life ( pcs )	1	1
Conclusion	Successful: Under the same parameters, ACHTECK matches the service life of other brands, but with better cost performance and greater customer satisfaction.	

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# Field report 8-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	SKD61 (HRC 62)	
Cutter		
Insert	APMT 1604PDER AP151H	APMT 1604PDER AP153H
Chipbreaker		
Working condition	Shoulder milling	Shoulder milling
Vc(m/min)	80	80
f(mm/z)	0.1	0.1
ap(mm)	0.5	0.5
Coolant	Emulsion	Emulsion
Tool life ( pcs )	10	13
Conclusion	Successful: Compared to the previous grade, the new grade offers a 30% longer service life.	

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# Field report 9-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	vermicular graphite cast iron 400 (HRC 37)	
Cutter		
Insert	LNGX 160616PNFN-W ACK**0	LNHQ 150416FN-W AP153H
Chipbreaker		
Working condition	Face milling	Face milling
Vc(m/min)	125	125
f(mm/z)	0.2	0.2
ap(mm)	0.3	0.3
Coolant	Emulsion	Emulsion
Tool life ( pcs )	50	68
Conclusion	Successful: Compared to other brands, ACHTECK delivers 36% longer service life – ensuring customer satisfaction.	

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# Field report 10-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	vermicular graphite cast iron 400 (HRC 37)	
Cutter		
Insert	LNHQ 150416FN-W AP151H	LNHQ 150416FN-W AP153H
Chipbreaker		
Working condition	Face milling	Face milling
Vc(m/min)	126	126
f(mm/z)	0.13	0.2
ap(mm)	0.3	0.3
Coolant	Emulsion	Emulsion
Tool life ( pcs )	25	33
Conclusion	Successful: Compared to the previous grade, the new grade offers a 32% longer service life.	

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# Field report 11-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	SKD61 (HRC 47)	
Cutter		
Insert	APMT 1604PDER AP151H	APMT 1604PDER AP153H
Chipbreaker		
Working condition	Shoulder milling	Shoulder milling
Vc(m/min)	200	200
f(mm/z)	0.15	0.15
ap(mm)	0.5	0.5
Coolant	Emulsion	Emulsion
Tool life ( min )	100	140
Conclusion	Successful: Compared to the previous grade, the new grade offers a 40% longer service life.	

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# Field report 12-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	Cr12MoV (HRC 58)	
Cutter		
Insert	APMT 1604PDER AP151H	APMT 1604PDER AP153H
Chipbreaker		
Working condition	Shoulder milling	Shoulder milling
Vc(m/min)	125	125
f(mm/z)	0.6	0.6
ap(mm)	0.1	0.1
Coolant	Emulsion	Emulsion
Tool life ( min )	50	80
Conclusion	Successful: Compared to the previous grade, the new grade offers a 60% longer service life.	

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# Field report 13-AP153H

Brand	Other brand	ACHTECK
Machine tool	Horizontal machine tool	
Workpiece	Cr12MoV (HRC 58)	
Cutter		
Insert	APMT 1135PDER-ZK ZK1**0	APMT 1135PDER AP153H
Chipbreaker	ZK	
Working condition	Shoulder milling	Shoulder milling
Vc(m/min)	80	80
f(mm/z)	0.8	0.8
ap(mm)	0.1	0.1
Coolant	Emulsion	Emulsion
Tool life ( min )	20	28
Conclusion	Successful: Compared to other brands, ACHTECK delivers 40% longer service life – ensuring customer satisfaction.	

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