

Milling grades for hardened materials

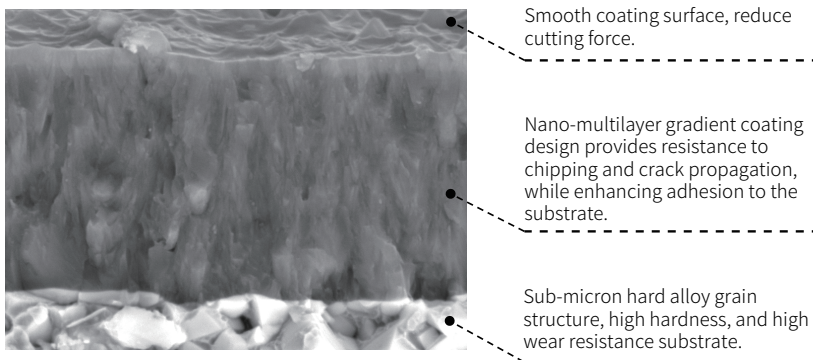
——AP153H



Milling grades for hardened materials

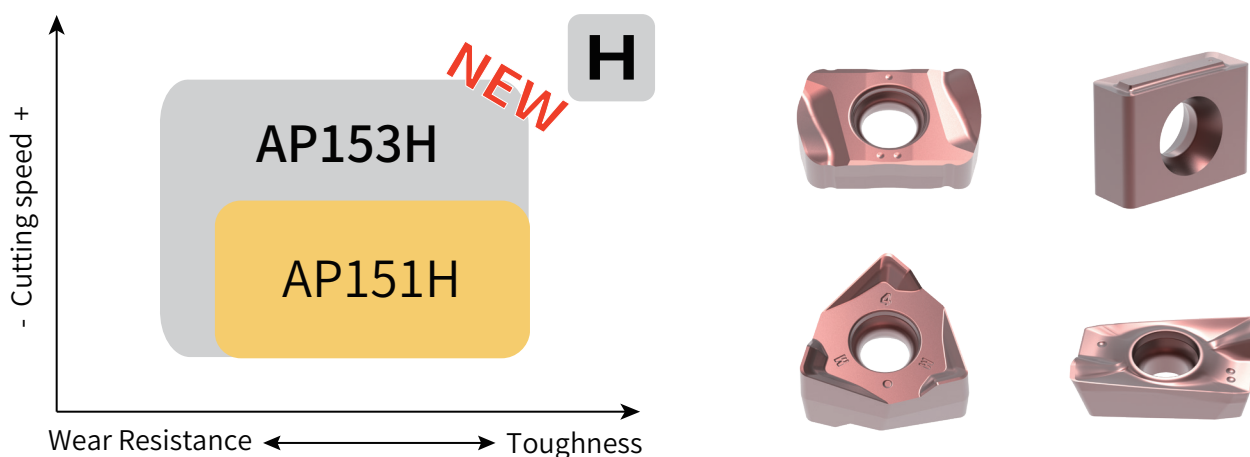
AP153H

◆ **Grade features**



- Achteck Tool's newly launched milling grade AP153H provides an efficient solution for machining materials like hardened steel, but also favourable in finishing operations in cast iron.
- The high-hardness substrate combined with a PVD wear-resistant, crack propagation-resistant, and oxidation-resistant coating gives AP153H excellent anti-chipping performance and effectively reduces the risk of coating failure due to high temperatures.
- AP153H significantly improves machining stability and workpiece accuracy. It demonstrates remarkable effectiveness in increasing machining efficiency and reducing production costs.

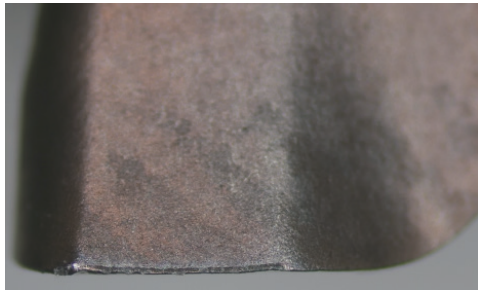
◆ **Application area**



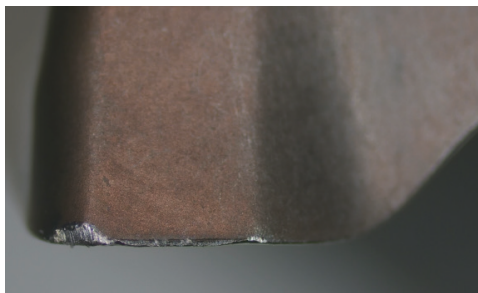
Material	H								K							
Application	Finishing				Roughing				Finishing				Roughing			
ISO	H05	H10	H15	H20	H25	H30	H40	H50	K05	K10	K15	K20	K25	K30	K40	K50
H	AP153H								AP153H							
Vc	40-55HRC: 30-100m/min 55-62HRC: 20-80m/min								100-300m/min							

◆ **Wear Resistance Comparison**

30-Minute Cutting Comparison

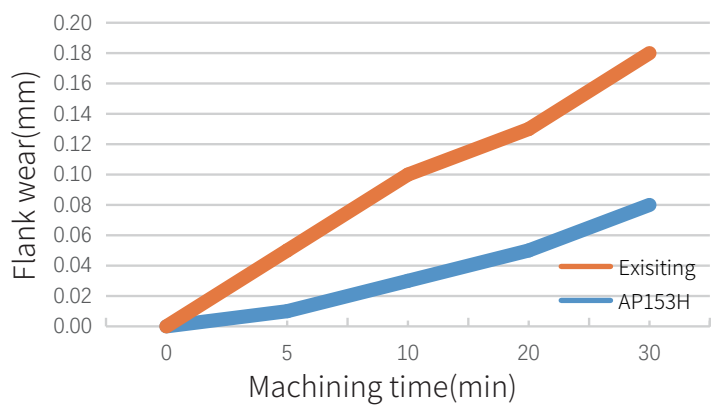


AP153H



Existing

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


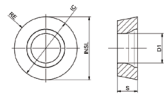

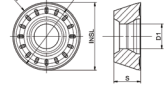
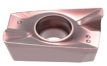
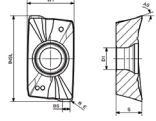
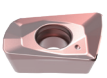
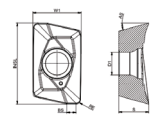

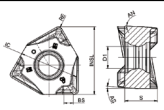
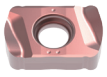
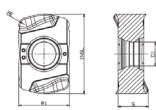


◆ **Product Range**

Insert	Figure	Product code	Dimensions (mm)					Grade
			IC	S	RE	BS	D1	AP153H
		SEGT 12T3AEEN-MM4	13.4	3.97	1.5	2.1	4.1	●
		ONHF 050408-MM3	12.7	4.76	0.8	-	2.5	●
		LNHQ 120408FN-W	4.76	9.4	0.8	-	4.4	●
		LNHQ 150416FN-W	4.76	9.25	1.6	-	4.4	●

●-Standard stock ○-Made-to-Order

• **Product Range**

Insert	Figure	Product code	Dimensions (mm)					Grade
			IC	S	RE	BS	D1	AP153H
		RDHW 0702MOS-HR2	7.00	2.38	-	-	2.8	●
		RPMW 10T3MOE-HR2	10.0	3.97	-	-	4.4	●
		RPMW 1003MOE-HR2	10.0	3.18	-	-	4.4	●
		RPMT 1204MOE	12.0	4.76	-	-	4.4	●
		APMT 1135PDER	6.26	3.50	0.8	1.2	2.8	●
		APMT 1604PDER	9.37	5.17	0.8	1.5	4.4	●
		AOMT 10T308ER-MM4	6.85	3.83	0.8	1.5	3.0	●
		ADMT 11T308R-MM4	6.90	3.60	0.8	1.4	2.8	●
		WNGU 080608R-MM4	12.5	6.44	0.8	2	4.4	●
		LNMX 060410ER-MM3	6.35	3.60	1.0	-	3.0	●
		LNMX 060410ER-MM4N	6.35	3.60	1.0	-	3.0	●
		LNMX 060410ER-MM4	6.35	3.60	1.0	-	3.0	●
		LNMX 100512ER-MM3	9.20	4.55	1.2	-	4.2	●
		LNMX 100512ER-MM4	9.20	4.55	1.2	-	4.2	●

●-Standard stock ○-Made-to-Order

◆ **Application case 1**

Workpiece: Mold

Material: SKD61

Material Hardness: 55 HRC

Cutter: D63-Z05

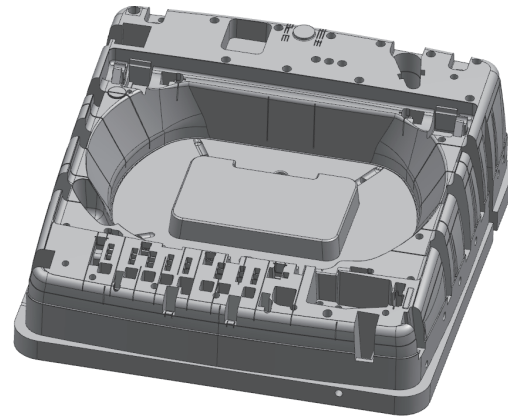
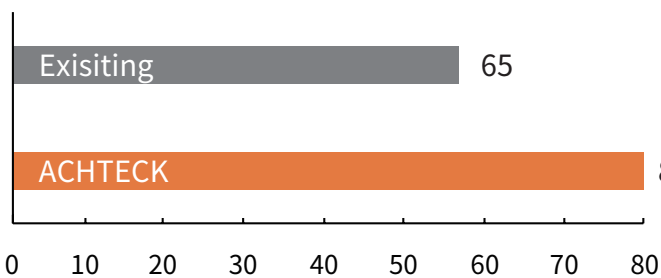
Insert: RPMW 10T3MOE AP153H

Machining: Rough face milling

Cutting Parameter: $V_c=50$ m/min, $a_p=0.3$ mm,
 $a_e=30$ mm, $f_z=0.4$ mm/t

Coolant: Wet

Comparison: Tool life (min)



◆ **Application case 2**

Workpiece: Mold

Material: Cr12MoV

Material Hardness: 62 HRC

Cutter: D32-Z03

Insert: APMT 1604PDER AP153H

Machining: Rough face milling

Cutting Parameter: $V_c=60$ m/min, $a_p=0.2$ mm,
 $a_e=20$ mm, $f_z=0.2$ mm/t

Coolant: Wet

Comparison: Tool life (min)

