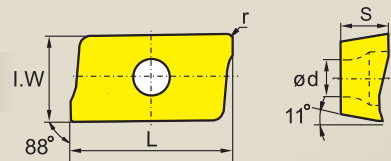





APKT Specification Table



Insert shape	Specification	L	I.W	S	ød	r	YB9320	YD101	YD201
	APKT11T304-APF	12.24	6.5	3.6	2.8	0.4	★		
	APKT11T308-APF	12.24	6.5	3.6	2.8	0.8	★		
	APKT160408-APF	17.877	9.33	5.76	4.4	0.8	★		
	APKT11T304-APM	12.24	6.5	3.6	2.8	0.4	★		
	APKT11T308-APM	12.24	6.5	3.6	2.8	0.8	★		
	APKT11T312-APM	12.24	6.5	3.6	2.8	1.2	★		
	APKT11T316-APM	12.24	6.5	3.6	2.8	1.6	★		
	APKT11T320-APM	12.24	6.5	3.6	2.8	2.0	★		
	APKT160408-APM	17.877	9.33	5.76	4.4	0.8	★		
	APKT160416-APM	17.877	9.33	5.76	4.4	1.6	★		
	APKT160420-APM	17.877	9.33	5.76	4.4	2.0	★		
	APKT160424-APM	17.877	9.33	5.76	4.4	2.4	★		
	APKT160430-APM	17.877	9.33	5.76	4.4	3.0	★		
	APKT11T304-ALH	12.24	6.5	3.6	2.8	0.4		★	★
	APKT11T308-ALH	12.24	6.5	3.6	2.8	0.8		★	★
	APKT160408-ALH	17.877	9.33	5.76	4.4	0.8		★	★



**ZHUZHOU CEMENTED CARBIDE CUTTING TOOLS CO., LTD.**

Address: Huanghe Southern Road, Tianyuan Zone,Zhuzhou, Hunan Province, China  
Postcode: 412007  
Tel: 0731-22882430 22889474 22889477 22889468 22887814 22880853  
22882725 22882431 22889486 22889425 22889485 22884403 22889483  
Fax: 0731-22882721 22885420 22887878  
Web site: <http://www.zccct.com>  
E-mail: [zccct@zccct.com](mailto:zccct@zccct.com)

New main force of square shoulder milling

APKT

New geometries

Powerful Upgrading geometries  
-APF/-APM/-ALH



**ZHUZHOU CEMENTED CARBIDE CUTTING TOOLS CO., LTD.**



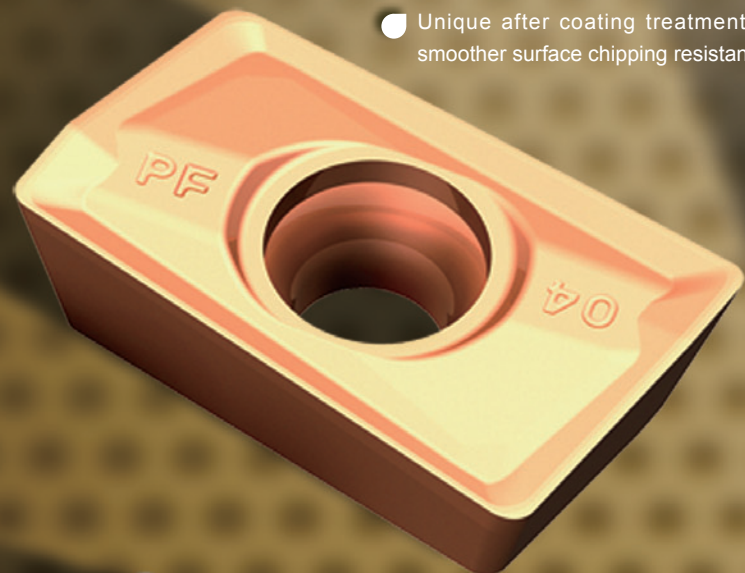


YB9320, new PVD grade, with unique atom rearrangement technique, achieves integration of coating hardness, toughness and thermal stability.

Optimized structure design greatly improves surface quality of workpiece while enhancing interpolating machining performance.

Greatly enhanced overall strength of insert for outstanding.

Unique after coating treatment for smoother surface chipping resistance.



High strength edge design, more superior impact resistance, able to bear higher feed.

Sharp edges

# APKT

**-APF** Precisely ground insert, suitable for high quality 90 degree side milling and step milling.

**-APM** Optimized edge design improves interpolation milling performance and greatly increases mould cavity machining efficiency.

**-ALH** Precisely ground insert, more suitable for high quality side milling and step milling in Aluminum alloy.

Complete range of nose radius

APKT11

0.4, 0.8, 1.2, 1.6, 2.0



APKT16

0.8, 1.6, 2.0, 2.4, 3.0

**Comprehensively improve mould cavity machining efficiency**



- Machine: Vertical machining center
- Tool diameter: Ø40mm
- Machining style: ramping
- Insert specification: APKT160408-APM/YB9320
- Workpiece material: P20 (HRC33-36)
- Cutting data:  $V_c=150\text{m/min}$ ,  $f=0.2\text{mm/z}$

Result: Optimized structure in combination with new "golden diamond" coating technique, ZCC-CT product with -APM geometry is more suitable for mould cavity machining, and the working efficiency is greatly improved in comparison with competitors' similar products.

**Greatly improved quality of square shoulder milling**

- Workpiece: turbine blade
- Material: 1Gr10NiW2VNB-5(HB190-230)
- Machining style: square milling
- Cooling style: water soluble cooling liquid
- Precision requirement: shiny surface, no vibration mark.
- Tool: APKT11T308-APF/YB9320
- Cutting data:  $V_c=100\text{m/min}$ ,  $f_z=0.2\text{mm/z}$ ,  $a_p=3\text{mm}$

Result: ZCC-CT products with APF geometry and precision grinding technique can obtain superior quality surface and is more suitable for 90 degree side milling.

Surface quality comparison



Product of Company A

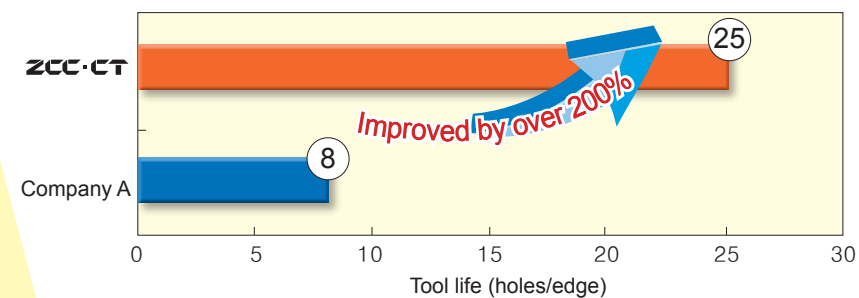
ZCC-CT product

**Greatly improved insert life**



- Machine: machining center
- Machining style: helical machining
- Tool diameter: Ø25mm
- Insert specification: APKT11T312-APM(YB9320)
- Workpiece material: die steel (HRC37)
- Cutting data:  $V_c=120\text{mm/min}$ ,  $f_z=0.2\text{mm/z}$ ,  $a_p=2\text{mm}$

Tool life comparison



Result: ZCC-CT products can work with stability. The tool life is 3 times longer than that of Company A. Products of Company A made distinct vibration mark and the insert are prone to break.