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Heavy Turning Tools

# 重力车削加工

全新  
起航

## CEMENTED CARBIDE TOOLS

CVD coating

**CVD涂层**

New groove type

**全新槽型**

**KP154U**

**KP254U**

**KP354U**

**HLR**

**HGR**

**HIR**

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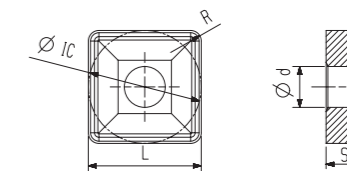
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## ■ KP154U

High hardness substrate, thick TiCN and thick Al<sub>2</sub>O<sub>3</sub> coating. Excellent wear resistance, suitable for heavy-duty machining under continuous working conditions.

PREF

## ■ KP254U

It has both hardness and strength matrix, thick TiCN and Al<sub>2</sub>O<sub>3</sub> coating. Excellent wear resistance, taking into account continuous and weak intermittent processing, and good general performance.

## ■ KP354U

High-strength substrate, thick TiCN and Al<sub>2</sub>O<sub>3</sub> coating. Excellent impact resistance, suitable for strong intermittent heavy turning.

不同工况  
不同解决方案

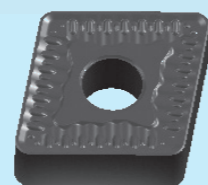
Different working conditions,  
different solutions.



### HLR—Light turning

The chip breaking range is wide, the cutting is light and fast, and it is suitable for continuous cutting or allowance. Smaller heavy turning.

PREF



### HGR—General turning

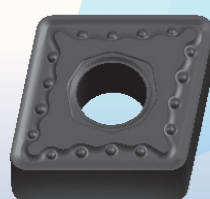
The groove structure takes into account both chip control and strength requirements. Suitable for continuous and weak intermittent heavy turning.



### HIR—Interrupted turning

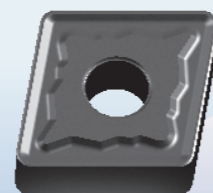
The cutting edge is strengthened, which is highly safe and suitable for heavy turning in unstable working conditions such as intermittent turning.

PREF



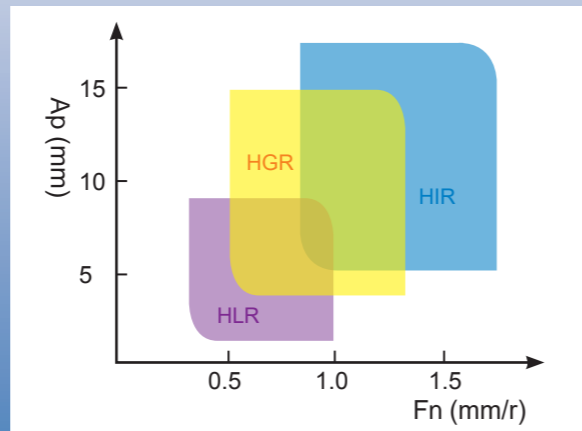
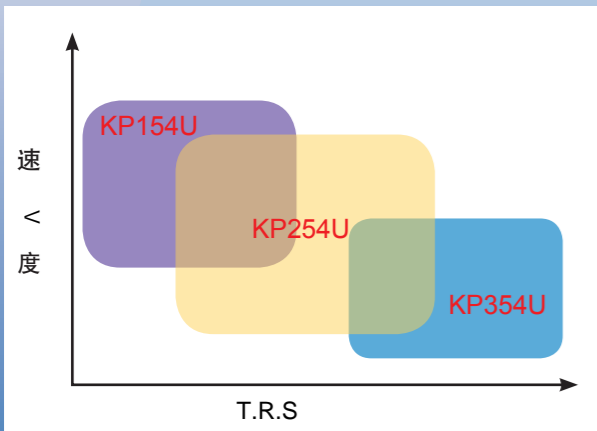
### HLR—Light turning

Double-sided heavy-duty low-parameter groove. Good chip flow control. Suitable for stable working conditions or small margin machining.





### HGR—General turning

Double-sided universal machining groove. The structure takes into account both chip control and strength requirements. It has extremely high economic efficiency under stable working conditions.

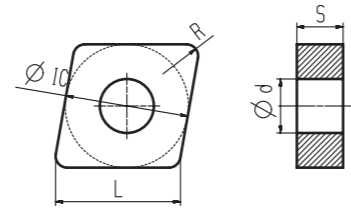


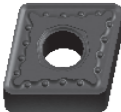
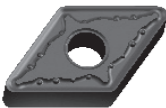
Insert Shape	Model	尺寸 (Dimension)mm					Grade				
		L	IC	d	S	R	KP154U	KP254U	KP354U	KM352U	KM452U
HLR	CNMM160608-HLR	16.1	15.875	6.35	6.35	0.8	★		●		○
	CNMM160612-HLR	16.1	15.875	6.35	6.35	1.2	★		●		○
	CNMM160616-HLR	16.1	15.875	6.35	6.35	1.6	★		●		○
	CNMM190612-HLR	19.3	19.05	6.35	7.94	1.2	★		●		○
	CNMM190616-HLR	19.3	19.05	6.35	7.94	1.6	★		●		○
	CNMM190624-HLR	19.3	19.05	6.35	7.94	2.4	★		●		○
HGR	CNMM250924-HLR	25.8	25.4	9.525	9.12	2.4	★		●		○
	SNMM150608-HLR	15.875	15.875	6.35	6.35	0.8	★		●		○
	SNMM150612-HLR	15.875	15.875	6.35	6.35	1.2	★		●		○
	SNMM150616-HLR	15.875	15.875	6.35	6.35	1.6	★		●		○
	SNMM190612-HLR	19.05	19.05	6.35	7.94	1.2	★		●		○
	SNMM190616-HLR	19.05	19.05	6.35	7.94	1.6	★		●		○
HIR	SNMM190624-HLR	19.05	19.05	6.35	7.94	2.4	★		●		○
	SNMM250724-HLR	25.4	25.4	7.94	9.12	2.4	★		●		○
	SNMM250924-HLR	25.4	25.4	9.525	9.12	2.4	★				○
	CNMM190612-HGR	19.3	19.05	6.35	7.94	1.2		★			○
	CNMM190616-HGR	19.3	19.05	6.35	7.94	1.6		★			○
	CNMM190624-HGR	19.3	19.05	6.35	7.94	2.4		★			○
HGR	CNMM250724-HGR	25.8	25.4	7.94	9.12	2.4		★			○
	CNMM250924-HGR	25.8	25.4	9.525	9.12	2.4		★			○
	SNMM190612-HGR	19.05	19.05	6.35	7.94	1.2		★			○
	SNMM190616-HGR	19.05	19.05	6.35	7.94	1.6		★			○
	SNMM190624-HGR	19.05	19.05	6.35	7.94	2.4		★			○
	SNMM250724-HGR	25.4	25.4	7.94	9.12	2.4		★			○
HGR	SNMM250924-HGR	25.4	25.4	9.525	9.12	2.4		★			○

Insert Shape	Model	尺寸 (Dimension)mm					Grade				
		L	IC	d	S	R	KP154U	KP254U	KP354U	KM352U	KM452U
	CNMM190624-HLR	19.3	19.05	6.35	7.94	2.4		●			★
	CNMM250724-HLR	25.8	25.4	7.94	9.12	2.4		●			★
	CNMM250924-HLR	25.8	25.4	9.525	9.12	2.4		●			★
	SNMM190624-HLR	19.05	19.05	6.35	7.94	2.4		●			★
	SNMM250724-HLR	25.4	25.4	7.94	9.12	2.4		●			★
	SNMM250924-HLR	25.4	25.4	9.525	9.12	2.4		●			★
	SNMM250932-HLR	25.4	25.4	9.525	9.12	3.2		●			★



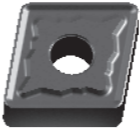

★ Mainly grade brands are in stock ● Optional grades ○ Made to Order

Double-sided heavy turning



Insert Shape	Model	尺寸 (Dimension)mm					Grade				
		L	IC	d	S	R	KP154U	KP254U	KP354U	KM352U	KM452U
	CNMG160608-HLR	16.1	15.875	6.35	6.35	0.8	★		●		
	CNMG160612-HLR	16.1	15.875	6.35	6.35	1.2	★		●		
	CNMG160616-HLR	16.1	15.875	6.35	6.35	1.6	★		●		
	CNMG190612-HLR	19.3	19.05	6.35	7.94	1.2	★		●		
	CNMG190616-HLR	19.3	19.05	6.35	7.94	1.6	★		●		
	CNMG190624-HLR	19.3	19.05	6.35	7.94	2.4	★		●		
	DNMG150608-HLR	15.5	12.7	6.35	5.16	0.8	★		●		
	DNMG150612-HLR	15.5	12.7	6.35	5.16	1.2	★		●		
	DNMG150616-HLR	15.5	12.7	6.35	5.16	1.6	★		●		

★ Mainly grade brands are in stock ● Optional grades ○ Made to Order

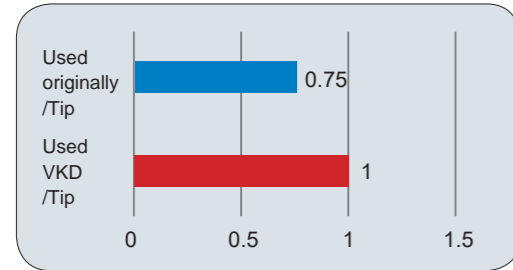
Insert Shape	Model	尺寸 (Dimension)mm					Grade				
		L	IC	d	S	R	KP154U	KP254U	KP354U	KM352U	KM452U
	SNMG150608-HLR	15.875	15.875	6.35	6.35	0.8	★		●		
	SNMG150612-HLR	15.875	15.875	6.35	6.35	1.2	★		●		
	SNMG150616-HLR	15.875	15.875	6.35	6.35	1.6	★		●		
	SNMG190612-HLR	19.05	19.05	6.35	7.94	1.2	★		●		
	SNMG190616-HLR	19.05	19.05	6.35	7.94	1.6	★		●		
	SNMG190624-HLR	19.05	19.05	6.35	7.94	2.4	★		●		
	TNMG270608-HLR	27.5	15.875	6.35	6.35	0.8					
	TNMG270612-HLR	27.5	15.875	6.35	6.35	1.2					
	TNMG270616-HLR	27.5	15.875	6.35	6.35	1.6					
	CNMG190612-HGR	19.3	19.05	6.35	7.94	1.2		★			●
	CNMG190616-HGR	19.3	19.05	6.35	7.94	1.6		★			●
	CNMG190624-HGR	19.3	19.05	6.35	7.94	2.4		★			●
	CNMG250924-HGR	25.8	25.4	9.525	9.12	2.4			★		●
	SNMG190612-HGR	19.05	19.05	6.35	7.94	1.2			★		●
	SNMG190616-HGR	19.05	19.05	6.35	7.94	1.6			★		●
	SNMG190624-HGR	19.05	19.05	6.35	7.94	2.4			★		●
	SNMG250924-HGR	25.4	25.4	9.525	9.12	2.4			★		●



工件 (Work piece)

## 风电主轴 Wind turbine main shaft

- 被加工材料 (Work piece material): alloy steel
- 加工设备 (Lathe type): Horizontal CNC lathe
- 使用刀片 (insert): KP15U SNMM250924-HGR
- 对比刀片 (Compare insert): A well-known manufacturer

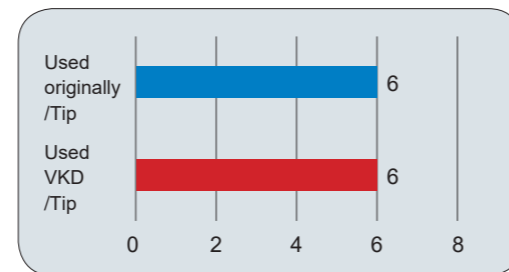


- 加工内容 (Processing content): Outer circle
- 换刀标准 (Insert change criteria): Surface processing quality, excessive wear of inserts.
- 切削液 (Cooling type): None
- 加工参数 (Cutting parameters):  
Vc=80-120m/min Fn=0.9mm/r Ap=5~10mm

工件 (Work piece)

## 回转支承 Slewing bearing

- 被加工材料 (Work piece material): 40CrNiMo
- 加工设备 (Lathe type): CNC Lathe
- 使用刀片 (insert): KP154U CNMG190616-HGR
- 对比刀片 (Compare insert): A well-known manufacturer
- 加工内容 (Processing content): Outer circle
- 换刀标准 (Insert change criteria): Surface processing quality, excessive wear of inserts.

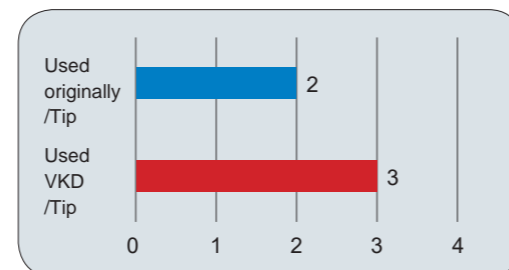


- 切削液 (Cooling type): Dry Cut
- 加工参数 (Cutting parameters):  
Vc=80-120m/min Fn=0.63mm/r Ap=2~8mm

工件 (Work piece)

## 石油接头 Oil tubular joint

- 被加工材料 (Work piece material): 40CrNiMo
- 加工设备 (Lathe type): CNC Lathe
- 使用刀片 (insert): KM452U CNMM250924-HIR
- 对比刀片 (Compare insert): A well-known manufacturer
- 加工内容 (Processing content): Outer circle and end face
- 换刀标准 (Insert change criteria): Surface processing quality, excessive wear of inserts.



- 切削液 (Cooling type): Dry Cut
- 加工参数 (Cutting parameters):  
Vc=80-120m/min Fn=1.3mm/r Ap=8~15mm



### Recommended turning speed (Vc: m/min)

	Continuous ~ Intermittent		Big intermittent
	KP152C	KP252C	KM402C
	160(100-220)	140(80-200)	120(70-150)

### Recommended turning depth and feed (Ap: mm Fn: mm/r)

	Continuous ○	Light Intermittent ◐	Intermittent ◑	Big intermittent ◒
HLR( Single )	Ap: 2~8 Fn: 0.3~1.0	Ap: 2~8 Fn: 0.3~0.6	----	----
HGR( Single )	----	Ap: 4~15 Fn: 0.5~1.3	Ap: 4~10 Fn: 0.5~0.9	----
HIR( Single )	----	----	Ap: 5~20 Fn: 0.7~1.5	Ap: 5~15 Fn: 0.7~1.0
HLR( Double )	Ap: 2~8 Fn: 0.3~1.0	Ap: 2~8 Fn: 0.3~0.6	----	----
HGR( Double )	Ap: 4~12 Fn: 0.5~1.0	Ap: 4~8 Fn: 0.5~1.0	----	----

