



Milling tools

# 铣削加工刀具

全新  
起航

CEMENTED CARBIDE TOOLS

株洲威克多硬质合金有限公司

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# 全新牌号

New Grades

## ■ KM252S

Ultrafine-grained cemented carbide.  
Special high-temperature resistant elements are added to the coating.  
TiAlSiN coating provides excellent heat resistance and is suitable for fine milling of stainless steel and heat-resistant steel.

## ■ KM353S

Fine-grained carbide.  
AlTiN coating for excellent wear resistance.  
Suitable for general milling applications.

## ■ KM453S

High-strength substrate.  
TiN coating provides excellent wear resistance.  
Suitable for rough milling of stainless steel and heat-resistant steel.

## ■ KD154U

High hardness substrate.  
CVD coating.  
Suitable for cast iron milling.

## Cutter Model Description

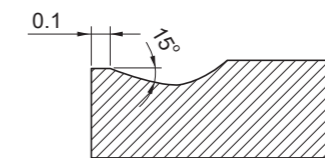
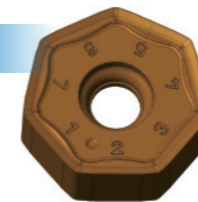
# FM 45 XN-8 100 B32 R-07-KT

Code	Describe		
1	FM	TM	LM
	Face milling cutter	Side and face milling cutter	Rod-type milling cutter
2	Main Declination		
3	Insert Shape		
4	Number of Teeth		
5	Cutting edge diameter (tip)		
6	Interface Type		
7	Tip rotation		
8	Cutting edge length		

## 全新槽型

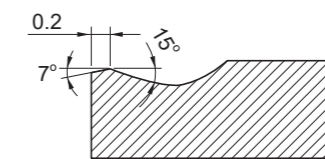
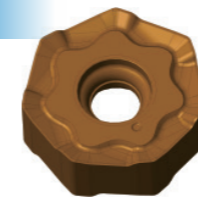
New Groove Type

WMM



Recommended for rough milling of stainless steel.

WPR



Recommended for steel and cast iron milling.

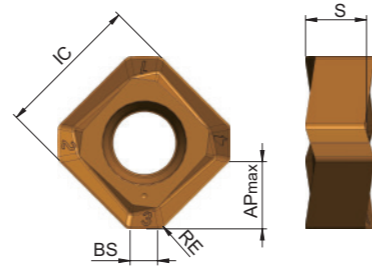
### ■ Recommended cutting speed (Vc: m/min)



ISO	KM252S	KM353S	KM453S	KD154U
M, S	160(120-200)	120(80-160)	90(60-120)	//
P	150(120-160)	120(100-140)	//	//
K	180(130-220)	//	//	200(160-240)

### ■ Recommended groove type

ISO	continuous	Intermittent	finishing
M, S	MF;WMM	MR	WMF
P	PM	HP	WPF
K	KM	KR	WKF;WPF

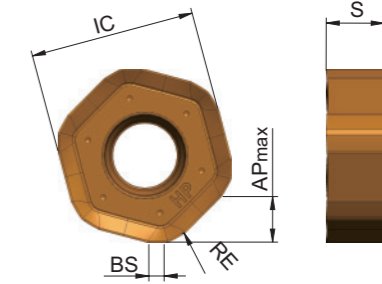
# FM45SN-SERIES



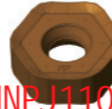


Insert Shape	Model	尺寸 (Dimension)mm					Grade			
		IC	S	BS	RE	APmax	KM252S	KM353S	KM453S	KD154U
ISCAR 伊斯卡  SNMU1305	SNMU1305ANTR	13.0	6.2	3.0	0.8	6.0		●		●
	SNMU1305ANTR-PR	13.0	6.2	3.0	0.8	6.0			●	
	SNMU1305ANTR-PF	13.0	6.2	3.0	0.8	6.0	●			
ISCAR 伊斯卡  SNHU1606	SNHU1606ADTR	16.35	7.45	2.84	0.8	7.15		●		●
	SNHU1606ADTR-PR	16.35	7.45	2.84	0.8	7.15			●	
	SNHU1606ADTR-PF	16.35	7.45	2.84	0.8	7.15	●			

Tool Model	Dimension					Num of Teeth	Type
	Edge Diameter	Cutterhead Diameter	Interface Size	Maximum Depth	Cutter Height		
450A22R-13-KT	50	47.65	22	6.0	41.2	4	A
663A22R-13-KT	63	60.65	22	6.0	41.2	6	A
780B27R-13-KT	80	77.65	27	6.0	51.2	7	B
8100B32R-13-KT	100	97.65	32	6.0	51.2	8	B
680B27R-16-KT	80	93.1	27	7.15	50	6	B
7100B32R-16-KT	100	114.6	32	7.15	50	7	B
8125C40R-16-KT	125	139.8	40	7.15	63	8	C
10160C40R-16-KT	160	174.8	40	7.15	63	10	C
12200C60R-16-KT	200	214	60	7.15	63	12	C

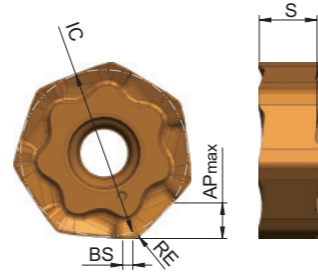
# FM45HN-SERIES



Insert Shape	Model	尺寸 (Dimension)mm					Grade			
		IC	S	BS	RE	APmax	KM252S	KM353S	KM453S	KD154U
WIDIA 威迪亚  HNPJ0704	HNPJ070412ANSN-HP	12.7	4.41	1.5	0.5	3.5			●	●
	HNPJ070412ANSN-PM	12.7	4.41	1.5	0.5	3.5	●	●		
	HNPJ070412ANSN-MF	12.7	4.41	1.5	0.5	3.5	●			
WIDIA 威迪亚  HNPJ0905	HNPJ0905ANSN-HP	15.88	5.46	1.9	1.0	4.5			●	●
	HNPJ0905ANSN-PM	15.88	5.46	1.9	1.0	4.5	●	●		
WIDIA 威迪亚  HNPJ1107	HNPJ1107ANSN-HP	22.3	7.39	2.65	1.4	5.5				●
	HNPJ1107ANSN-PM	22.3	7.39	2.65	1.4	5.5			●	

Tool Model	Dimension					Num of Teeth	Type
	Edge Diameter	Cutterhead Diameter	Interface Size	Maximum Depth	Cutter Height		
450A22R-07-KT	50	59.7	22	3.5	41.2	4	A
663A22R-07-KT	63	72.7	22	3.5	41.2	6	A
780B27R-07-KT	80	89.7	27	3.5	51.2	7	B
8100B32R-07-KT	100	109.7	32	3.5	51.2	8	B
680B27R-09-KT	80	92.1	27	4.5	50	6	B
7100B32R-09-KT	100	112.1	32	4.5	50	7	B
8125C40R-09-KT	125	137.1	40	4.5	63	8	C
10160C40R-09-KT	160	172.1	40	4.5	63	10	C
12200C60R-11-KT	200	217.0	60	5.5	63	12	C
16250C60R-11-KT	250	267.0	60	5.5	63	16	C
20315D60R-11-KT	315	332.0	60	5.5	70	20	D

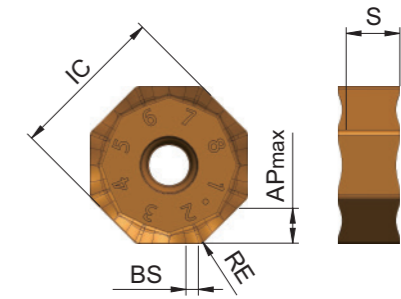
# FM45XN-SERIES







Insert Shape	Model	尺寸 (Dimension)mm					Grade			
		IC	S	BS	RE	APmax	KM252S	KM353S	KM453S	KD154U
  瓦尔特 XNMU 0705	XNM/EU070508-WMM	14.5	5.0	1.0	0.8	4.0	●		●	
	XNM/EU070508-WPR	14.5	5.0	1.0	0.8	3.2	●	●		
  特固克 XNMU 0906	XNM/EU090608-WMM	19.05	5.9	1.2	1.2	5.4	●		●	
	XNM/EU090608-WPR	19.05	5.9	1.2	1.2	5.4	●	●		

Tool Model	Dimension					Num of Teeth	Type
	Edge Diameter	Cutterhead Diameter	Interface Size	Maximum Depth	Cutter Height		
<b>FM45XN-</b> 450A22R-07-KT	50	59.7	22	3.5	41.2	4	A
663A22R-07-KT	63	72.7	22	3.5	41.2	6	A
780B27R-07-KT	80	89.7	27	3.5	51.2	7	B
8100B32R-07-KT	100	109.7	32	3.5	51.2	8	B
9125C40R-07-KT	125	137.1	40	4.5	63	9	C
680B27R-09-KT	80	92.1	27	4.5	50	6	B
7100B32R-09-KT	100	112.1	32	4.5	50	7	B
9125C40R-09-KT	125	137.1	40	4.5	63	9	C
10160C40R-09-KT	160	172.1	40	4.5	63	10	C

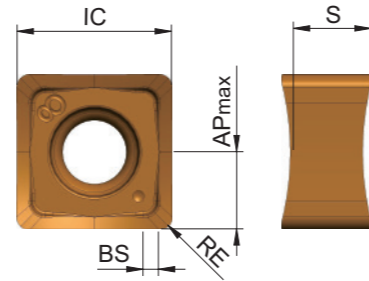
# FM45ON-SERIES


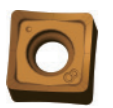




Insert Shape	Model	尺寸 (Dimension)mm					Grade			
		IC	S	BS	RE	APmax	KM252S	KM353S	KM453S	KD154U
  瓦尔特 ONHU 0504	ONHU050408-PR	12.7	4.41	0	0.8	2.5	●			●
	ONHU050408-MF	12.7	4.41	0	0.8	2.5		●	●	
  山高 ONHU0905	ONHU060408-PR	15.88	5.46	0	0.8	3.5	●			●
	ONHU060408-MR	15.88	5.46	0	0.8	3.5		●	●	
	ONHU090520-PR	22.0	7.39	0	2.0	5.0	●			●
	ONHU090520-PM	22.0	7.39	0	2.0	5.0		●	●	

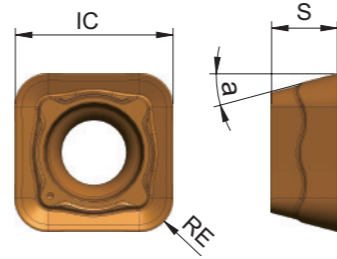
Tool Model	Dimension					Num of Teeth	Type
	Edge Diameter	Cutterhead Diameter	Interface Size	Maximum Depth	Cutter Height		
<b>FM45ON-</b> 450A22R-05-KT	50	57.44	22	2.5	41.2	4	A
868A22R-05-KT	68	75.44	22	2.5	41.2	8	A
880B27R-05-KT	80	87.44	27	2.5	51.2	8	B
663A22R-06-KT	63	72.30	22	3.5	51.2	6	A
780B27R-06-KT	80	89.30	27	3.5	63	7	B
8100B32R-06-KT	100	109.30	32	3.5	50	8	B
9125C40R-06-KT	125	134.30	40	3.5	50	9	C
563A22R-09-KT	63	72.90	22	5.0	63	5	A
780B27R-09-KT	80	92.90	27	5.0	63	7	B
8100B32R-09-KT	100	112.90	32	5.0	63	8	B
9125C40R-09-KT	125	137.90	40	5.0	63	9	C
10160C40R-09-KT	160	172.90	40	5.0	63	10	C
12200C60R-09-KT	200	212.90	60	5.0	63	12	C






## FM88SN-SERIES



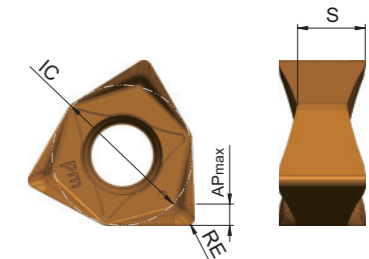
Insert Shape	Model	尺寸 (Dimension)mm					Grade			
		IC	S	BS	RE	APmax	KM252S	KM353S	KM453S	KD154U
  瓦尔特 SNMX0904	SNMX090408-MF	9.5	4.8	1.0	0.8	4.5		●		
	SNMX090412-MF	9.5	4.8	1.0	1.2	4.5		●		
  京瓷 SNMU1305	SNMU130508EN-WPM	13.0	5.5	1.2	0.8	6.0		●		
	SNHU130610-MM	13.0	6.0	1.2	1.0	6.0		●		

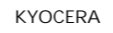

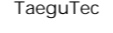

## FM45SD-SERIES



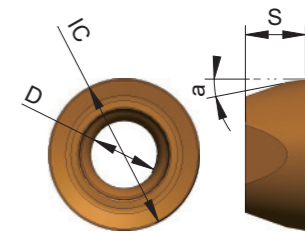
Insert Shape	Model	尺寸 (Dimension)mm				Grade			
		IC	S	a	RE	KM252S	KM353S	KM453S	KD154U
  瓦尔特 SDMT06T2	SDMT06T208-MF	6.4	2.78	15°	0.8	●		●	
	SDMT06T208-PR	6.4	2.78	15°	0.8		●		●
  瓦尔特 SDMT09T3	SDMT09T308-MF	9.5	3.97	15°	0.8	●		●	
	SDMT09T308-PR	9.5	3.97	15°	0.8		●		●
  瓦尔特 SDMT1204	SDMT120408-MF	12.7	4.76	15°	0.8	●		●	
	SDMT120408-PR	12.7	4.76	15°	0.8		●		●





## FM90WN-SERIES



Insert Shape	Model	尺寸 (Dimension)mm				Grade			
		IC	S	RE	APmax	KM252S	KM353S	KM453S	KD154U
  京瓷 WNMU080608	WNMU080608EN-PM	14.0	6.65	0.8	2	●	●		●
	WNMU080608EN-PR	14.0	6.65	0.8	2	●	●		●
  特固克 6NGU0604 6NGU0905	6NGU060404R-KM	9.0	4.20	0.4	3	●	●		●
	6NGU060408R-KM	9.0	4.20	0.8	3	●	●		●
	6NGU090508R-KM	12.7	5.85	0.8	4	●	●		●
	6NGU090516R-KM	12.7	5.85	1.6	4	●	●		●

## CM00RX-SERIES

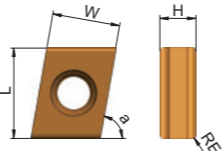
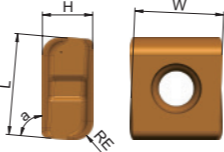
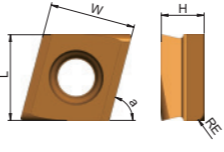
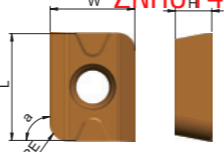
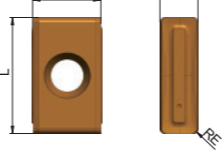


Insert Shape	Model	尺寸 (Dimension)mm				Grade			
		IC	a	S	D	KM252S	KM353S	KM453S	KD154U
	RPKT10T3MOE-OR	10.0	11	3.97	4.4	●	●		
	RPKT10T3MOE-WR	10.0	11	3.97	4.4	●	●		
	RPK/MT1204MOE-MR	12.0	11	4.76	4.4	●	●		
	RPK/MT1204MOE-MF	12.0	11	4.76	4.4	●	●		
	RCKT1606MO	16.0	7	6.35	5.4	●	●		
	RDKT2006MO-OH	20.0	15	6.35	6.5	●		●	

# FM90LN-SERIES

Insert Shape	Model	尺寸 (Dimension)mm				Grade			
		L	W	H	RE	KM252S	KM353S	KM453S	KD154U
 ISCAR 伊斯卡 T490-LNHT1306	LNHU130612PNTR-KPR	13.8	10.252	6.65	08	●	●		
	LNHU130612PNTR-KPR	13.8	10.252	6.65	12	●	●		
	LNHU150908Znen-MF	15	13.86	9.5	08	●	●		
	LNHU150912Znen-MF	15	13.86	9.5	12	●	●		
 Ingersoll 英格索尔 DPM424	LNHU150708-KR	15	13.7	7.6	08	●	●		
	LNHU150712-KR	15	13.7	7.6	12	●	●		
 ISCAR 伊斯卡 LNHT150608N-KR	LNHU150608N-KR	15	9.555	6	08	●	●		
	LNHT150612N-KR	15	9.555	6	12	●	●		

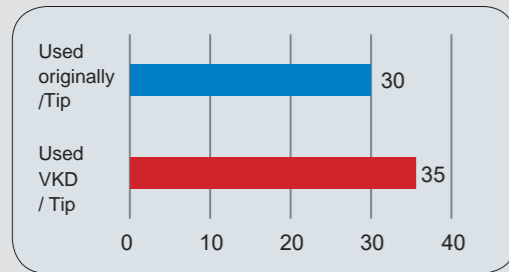
# FASC-SERIES

Insert Shape	Model	尺寸 (Dimension)mm					Grade			
		L	W	H	RE	a	KM252S	KM353S	KM453S	KD154U
 TaeguTec 特固克 LNHT1306	CNHX100508-PR	16.0	12.0	6.4	0.8	80	●		●	
	CNHX120508-PR	12.7	11.0	5.4	0.8	80	●		●	
	CNHX160608-PR	10.3	10.3	5.6	0.8	80	●		●	
 TaeguTec 特固克 LNHT1306	LNHU120623-PM	12.7	11.2	6.3	2.3	85	●		●	
	LNHU130630-PM	13.0	11.2	6.7	3.0	85	●		●	
	CNHX120612R-PM	12.7	12.7	6.35	1.2	75	●		●	
 TaeguTec 特固克 LNHT1306	CNHX120612L-PM	12.7	12.7	6.35	1.2	75	●		●	
	ZNHU110-08-WPF	10.6	13.0	6.8	0.8	94	●		●	
	ZNHU140-08-WPF	14	13.0	7.2	0.8	94	●		●	
 coromant 山特维克 LPET1404	LPET140440R-KR	14.5	11.5	4.95	4.0	90	●		●	
	LPET140440L-KR	14.5	11.5	4.95	4.0	90	●		●	
	LNHU150905-4R80	15.87	9.335	5.2	08	//	●			●
 ISCAR 伊斯卡 LNHT150905-4T150	LNHU150905-4T150	15.87	9.335	5.2	//	//	●			●

工件 (Work piece)

### 汽车联排 Inline Engine

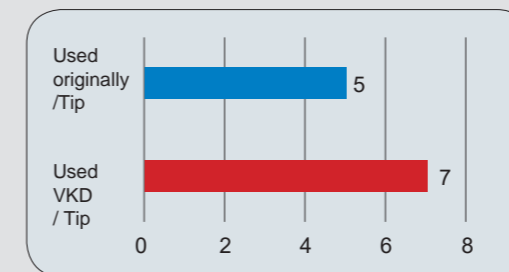
- 被加工材料 (Work piece material): 1.4837
- 加工设备 (Machine Tool): Kitazawa-Okuma
- 使用刀片 (insert): KM403S- XNMU070508-WMM
- 使用刀盘 (tool): FM45XN-7100B32R-07-KT



- 加工内容 (Processing content): Rough milling air outlet flange
- 换刀标准 (Insert change criteria): Excessive Burr
- 切削液 (Cooling type): Dry Cut
- 加工参数 (Cutting parameters):  
Vc=110m/min Fz=0.23mm/z Ap=4mm

工件 (Work piece)

### 钛合金轧坯 Titanium Alloy Rolled Billet

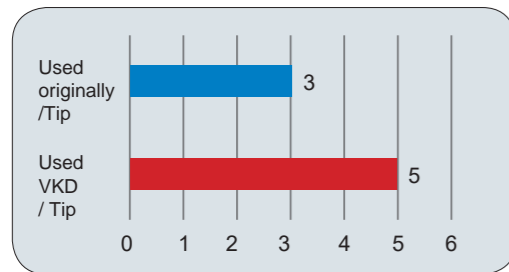


- 被加工材料 (Work piece material): CT4
- 加工设备 (Machine Tool): Gantry End Milling Machine
- 使用刀片 (insert): KM452S- ONHU090520-PM
- 使用刀盘(tool): FM45ON-12200C60R-09-KT
- 加工内容(Processing content): Rough milling surface
- 换刀标准 (Insert change criteria): Insert wear amount
- 切削液(Cooling type): External Water Cooling
- 加工参数 (Cutting parameters):  
Vc=43m/min Fz=0.08mm/z Ap=2.0mm

工件 (Work piece)

### 压力机横梁 Press Crossbeam

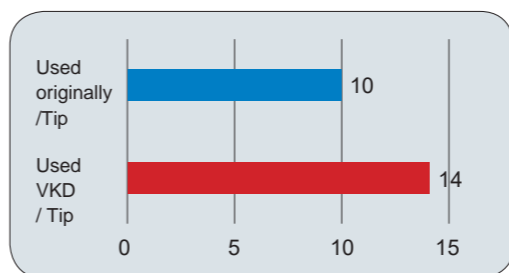
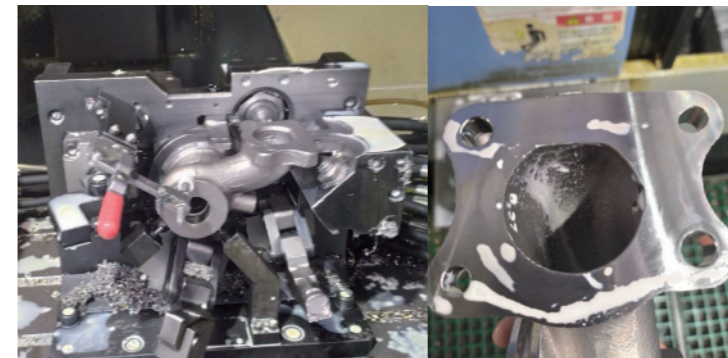
- 被加工材料 (Work piece material): QT500-7
- 加工设备 (Machine Tool): Haitian Horizontal Milling Machine
- 使用刀片 (insert): KM253S- WNMU080608EN-PM
- 使用刀盘 (tool): FM90WN-7100B32R-08-KT



- 加工内容 (Processing content): Rough milling surface
- 换刀标准 (Insert change criteria): Insert wear amount
- 切削液 (Cooling type): External Oil Cooling
- 加工参数 (Cutting parameters):  
Vc=180m/min Fz=0.15mm/z Ap=2mm

工件 (Work piece)

### 涡轮壳 Turbine Casing



- 被加工材料 (Work piece material): 1.4826
- 加工设备 (Machine Tool): Machining Center
- 使用刀片 (insert): KM252S- HNPJ070412ANSN-MF
- 使用刀盘 (tool): FM45HN-6100B32R-07-KT
- 加工内容 (Processing content): Flange surface finishing
- 换刀标准 (Insert change criteria): Surface roughness
- 切削液 (Cooling type): Internal Cooling Emulsion
- 加工参数 (Cutting parameters):  
Vc=180m/min Fz=0.1mm/z Ap=0.2mm