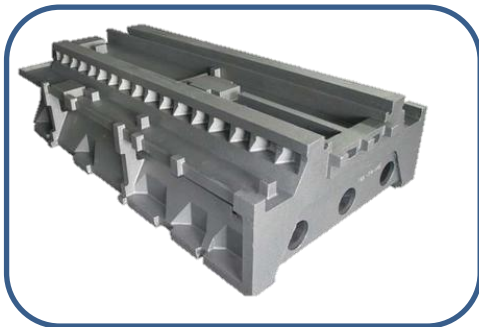


# Helical Edge Shoulder Milling Tools

## MEB190 +APKT



Shoulder Milling tools are widely used in various industries. APKT series products provide perfect solution for different application.



General Machinery Industry



Mold Industry



Automobile Industry

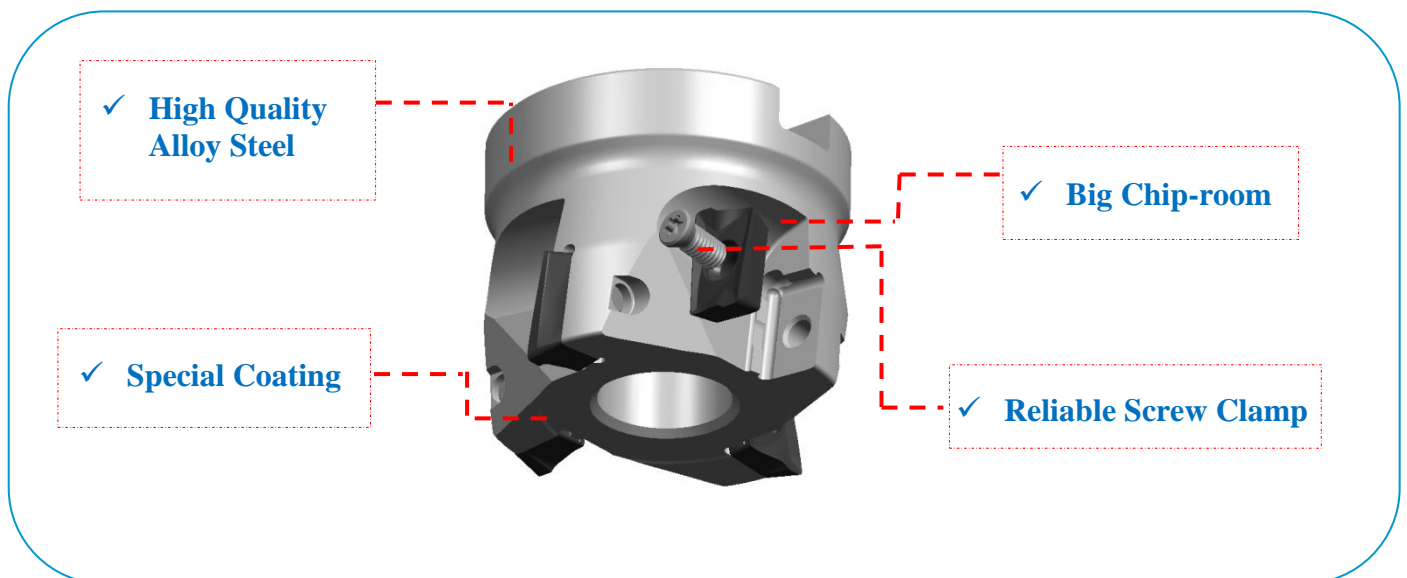


Aerospace Industry

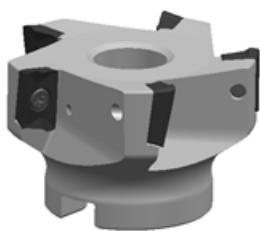
## Grade

ISO	Steel <b>P</b>					Stainless Steel <b>M</b>					Cast Iron <b>K</b>					Nonferrous Material <b>N</b>				HRSA <b>S</b>				
	P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40	N01	N10	N20	N30	S01	S10	S20	S30	S40
Grade																								

## Cutter Feature



### MEB190 - Arbor



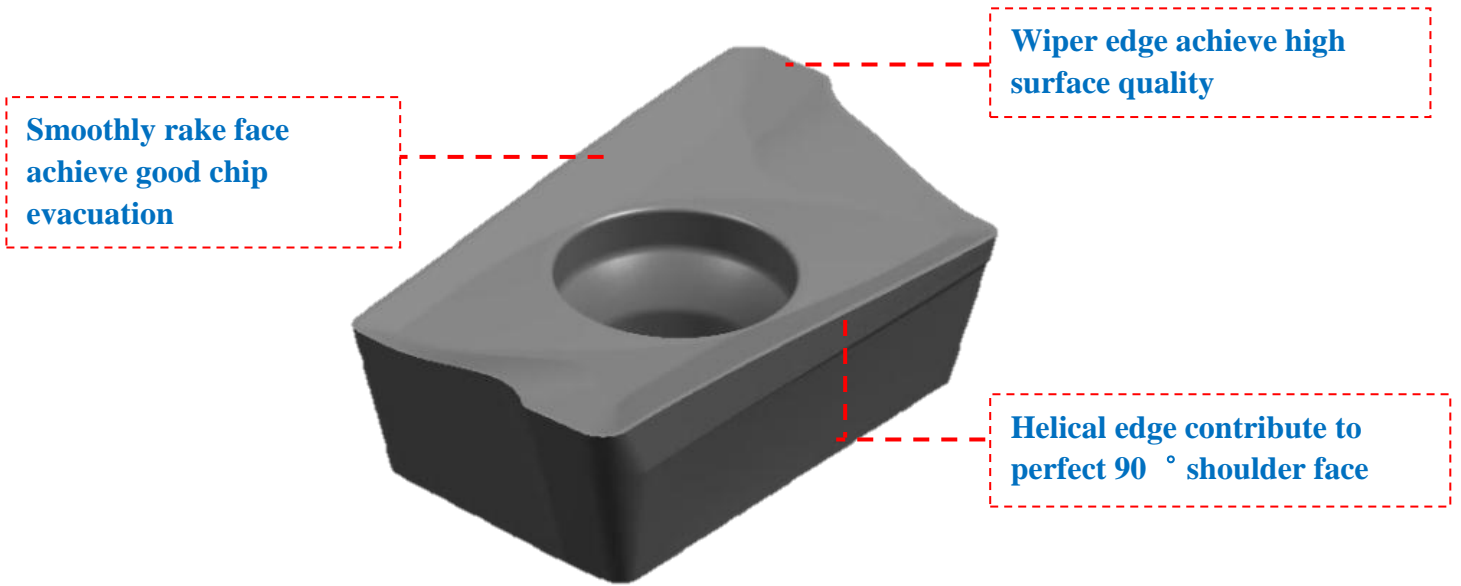
- Big Face Milling
- Various Connect Dimension

### MEA190 - Werden



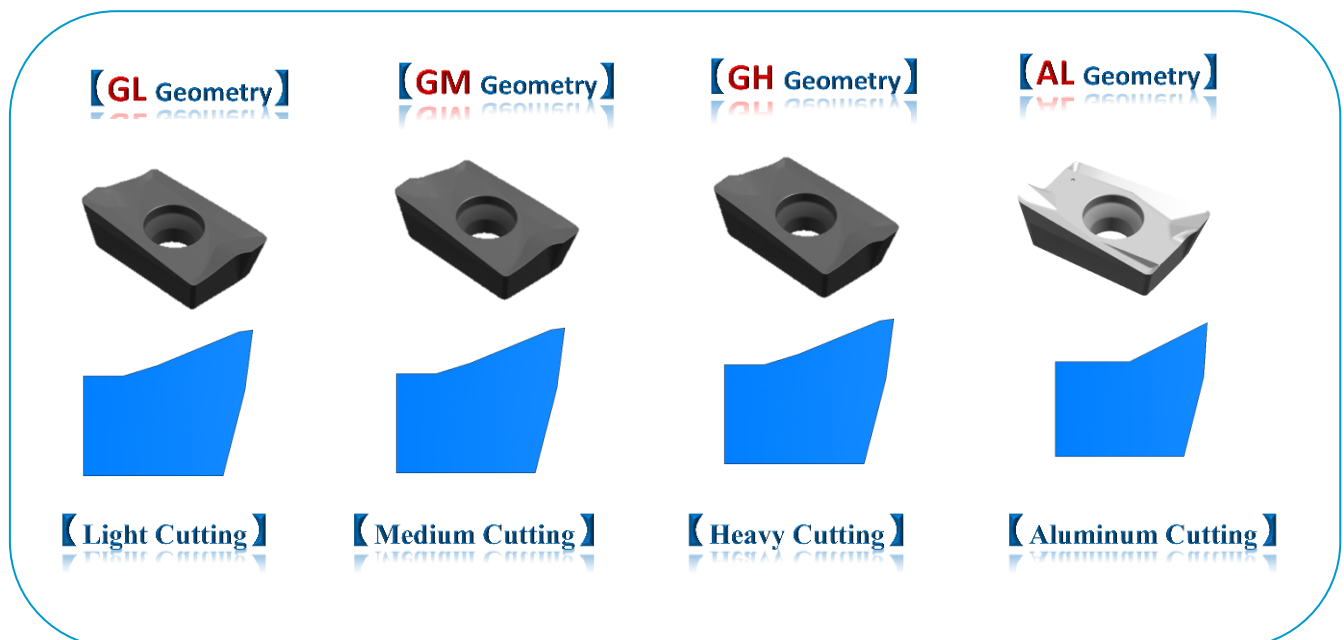
- Small Face Milling
- Long Hang Out

## Insert Feature

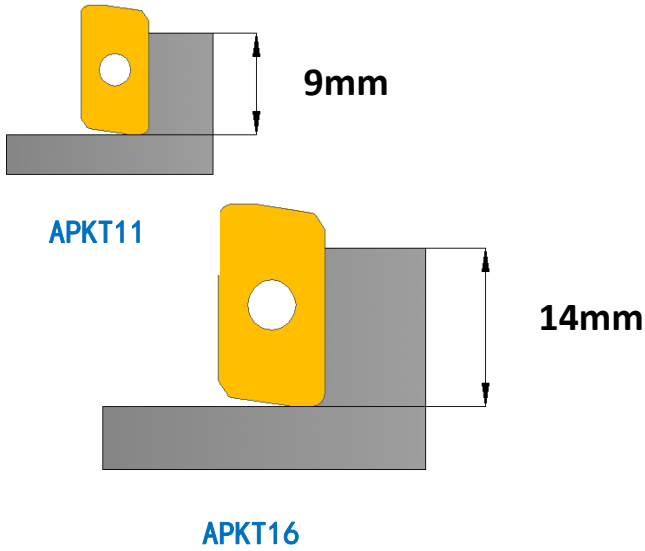


## Geometry Introduction

Various geometries meet the demands of customer in different application



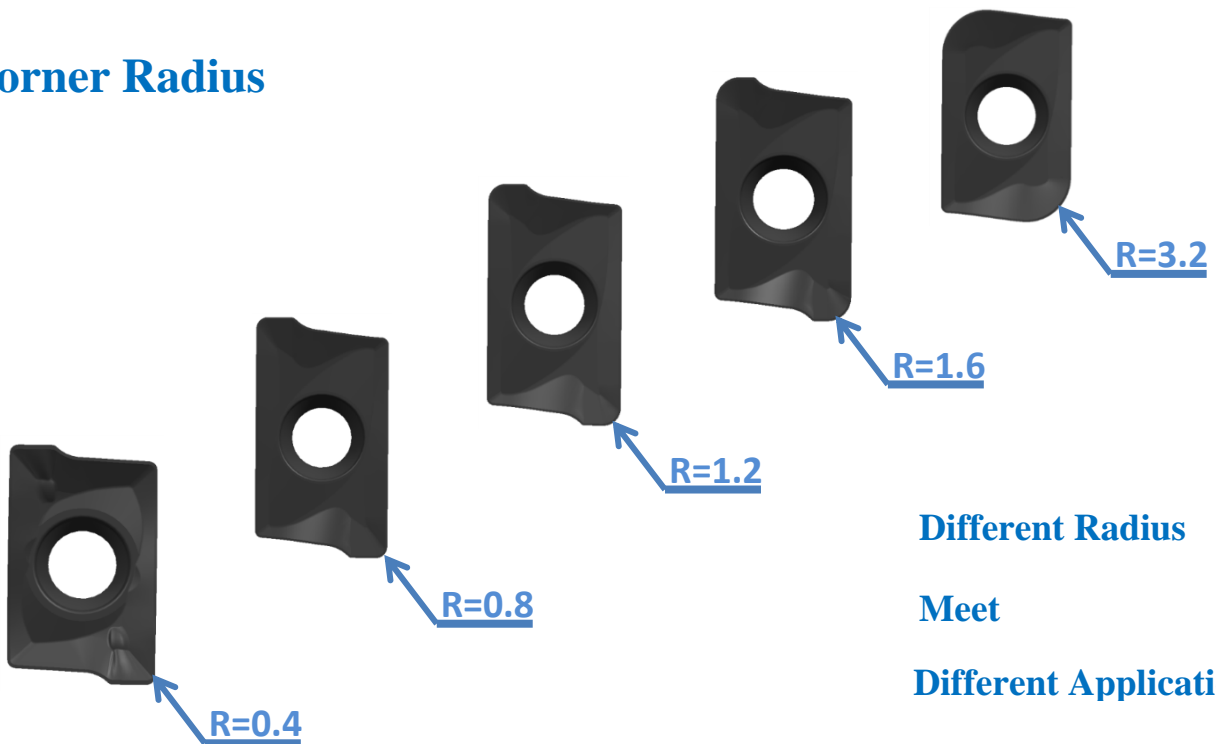
## Maximum Depth of Cutting



## APKT 11 AND APKT 16

Two kinds dimension insert for choice

## Corner Radius



Different Radius

Meet

Different Application


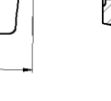






# Inserts

## APKT11

●: Stable

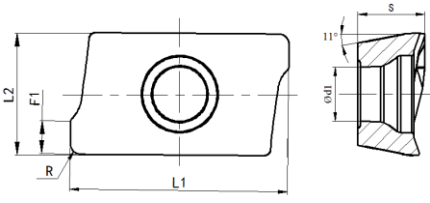







●: Normal

⊕: Unstable

Application	Appearance	Insert Type	Dimension					Grade						
			L1	L2	S	F1	R	GA4225	GA4230	GK4125	GK2115	GN9125	GM2140	GS4130
Light Cutting		APKT113504R-GL	11.31	7	3.5	2	0.4	●	●	●	●		●	○
		APKT113508R-GL	11.31	7	3.5	2	0.8	●	●	●	●		○	○
Medium Cutting		APKT113504R-GM	11.31	7	3.5	2	0.4	●	●	●	●		●	●
		APKT113508R-GM	11.31	7	3.5	2	0.8	●	●	●	●		●	○
		APKT113516R-GM	11.31	7	3.5	2	1.6	○	○	○	○		○	○
		APKT113532R-GM	11.31	7	3.5	2	3.2	●	●	●	●		●	○
Heavy Cutting		APKT113516R-GH	11.31	7	3.5	2	1.6	●	●	●	●		●	○
Aluminum Cutting		APET113508R-NL	11.31	7	3.5	2	0.8						○	

● Stock ○ Order

# APKT16

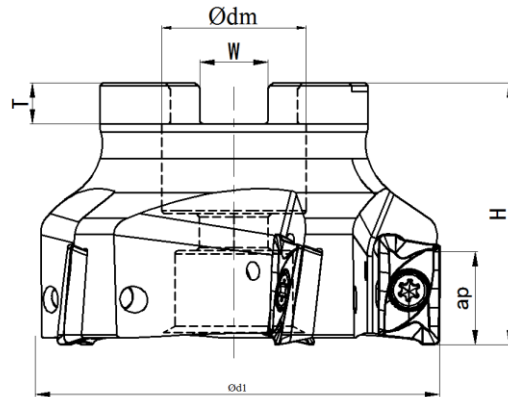
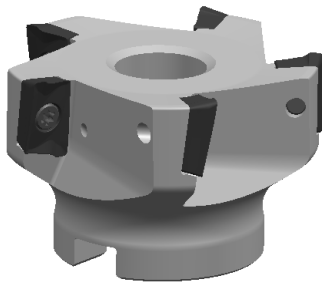
Application	Appearance	Insert Type	Dimension					Grade						
			L1	L2	S	F1	R	GA4225	GA4230	GK4125	GK2115	GN9125	GM2140	GS4130
			<b>Workpiece materials</b>										<b>P</b> Steel <b>M</b> Stainless Steel <b>K</b> Cast Iron <b>N</b> Non-ferrous Metal <b>S</b> Heat-resistant Alloy, Ti Alloy <b>H</b> High Hardness Material	
Medium Cutting		APKT160408R-GM	16.96	9.4	5.2	2.6	0.8	●	●	●	●		○	●
		APKT160412R-GM	16.96	9.4	5.2	2.6	1.2	●	●	●	●		○	○
		APKT160416R-GM	16.96	9.4	5.2	2.6	1.6	○	○	○	○		○	○
		APKT160432R-GM	14	9.4	5.1	-	3.2	●	●	●	●		○	●
Heavy Cutting		APKT160416R-GH	16.96	9.4	5.2	2.6	1.6	●	●	●	●		○	○
		APKT160432R-GH	14	9.4	5.1	-	3.2	○	○	○	○		○	
Aluminum Cutting		APET160408R-NL	16.96	9.4	5.2	2.6	0.8						●	

● Stock ○ Order

# Cutter

## MEB190

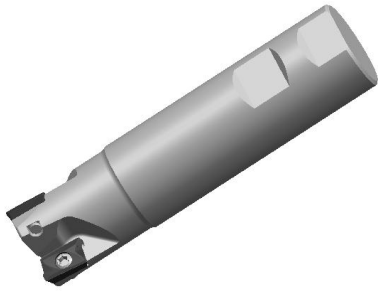
### ◆ Arbor



Ordering Code	Diameter	Teeth	Dimensions					ap	Gauge Insert	Shape	Stock
			ΦD1	Φdm	H	W	T				
MEB190-050R04A22-AP16	50	4	50	22	40	10.4	6.3	14	AP*T1604	Fig1	●
MEB190-063R05A22-AP16	63	5	63	22	40	10.4	6.3	14		Fig1	●
MEB190-080R05A22-AP16	80	6	80	27	50	10.4	6.3	14		Fig1	●
MEB190-100R05A22-AP16	100	8	100	32	50	10.4	6.3	14		Fig1	●
MEB190-125R09A40-AP16	125	9	125	40	50	10.4	6.3	14		Fig1	○

● Stock ○ Order

◇ Werden



Ordering Code	Diameter	Teeth	Dimensions (mm)				ap	Gauge Insert	Shape	Stock
			ΦD1	Φdm	L	L1				
MEB190-016R02W16-AP11	16	2	16	16	130	40	9	AP*T1135	Fig2	●
MEB190-020R03W20-AP11	20	3	20	20	130	50	9		Fig2	●
MEB190-025R03W25-AP11	25	3	25	25	130	50	9		Fig2	●
MEB190-032R03W32-AP11	32	4	32	32	130	50	9		Fig2	●
MEB190-025R02W25-AP16	25	2	25	25	130	50	14	AP*T1604	Fig2	●
MEB190-032R03W32-AP16	32	3	32	32	130	50	14		Fig2	●
MEB190-032R03W32-AP16 L	32	3	32	32	200	50	14		Fig2	●

● Stock ○ Order



## Recommended Cutting Data

Cutting Data								
Material	Hardness	Grade	Speed V <sub>c</sub> (m/min)	Feed (mm/t)				
				Light	Medium	Heavy	Nonferrous Metal	
				GL	GM	GH	NL	
P	Low Carbon Steel	≤HB180	GA4230 GP4225	<b>180</b> (150-200)	<b>0.1</b> (0.05-0.15)	<b>0.15</b> (0.1-0.2)	<b>0.2</b> (0.1-0.25)	
	Carbon Steel, Alloy Steel	HB180-280	GA4230 GP4225	<b>150</b> (120-200)	<b>0.1</b> (0.05-0.15)	<b>0.15</b> (0.1-0.2)	<b>0.2</b> (0.1-0.25)	
	Carbon Steel, Alloy Steel	HB280-350	GA4230 GP4225	<b>150</b> (120-200)	<b>0.1</b> (0.05-0.15)	<b>0.15</b> (0.1-0.2)	<b>0.2</b> (0.1-0.25)	
M	Stainless Steel	≤HB280	GM2140 GS4130 GA4230	<b>140</b> (100—160)	<b>0.15</b> (0.1--0.3)	<b>0.15</b> (0.1-0.2)	<b>0.2</b> (0.1-0.25)	
K	Gray Cast Iron Nodular Cast Iron	≤HB350	GK2115 GK4125	<b>120</b> (100-140)	<b>0.1</b> (0.05-0.15)	<b>0.15</b> (0.1-0.2)	<b>0.2</b> (0.1-0.25)	
N	Nonferrous Metal	HB60-210	GN9125	<b>500</b> (200-900)		-	-	<b>0.1</b> (0.05-0.25)
S	Heat-resistant Alloy Steel	HRC25-35	GS4130 GM2140	<b>60</b> (50-100)	<b>0.1</b> (0.05-0.15)	<b>0.1</b> (0.05-0.15)	<b>0.15</b> (0.1-0.2)	