

**NEW
PRODUCT!**

AFM45-SE12 Face Milling

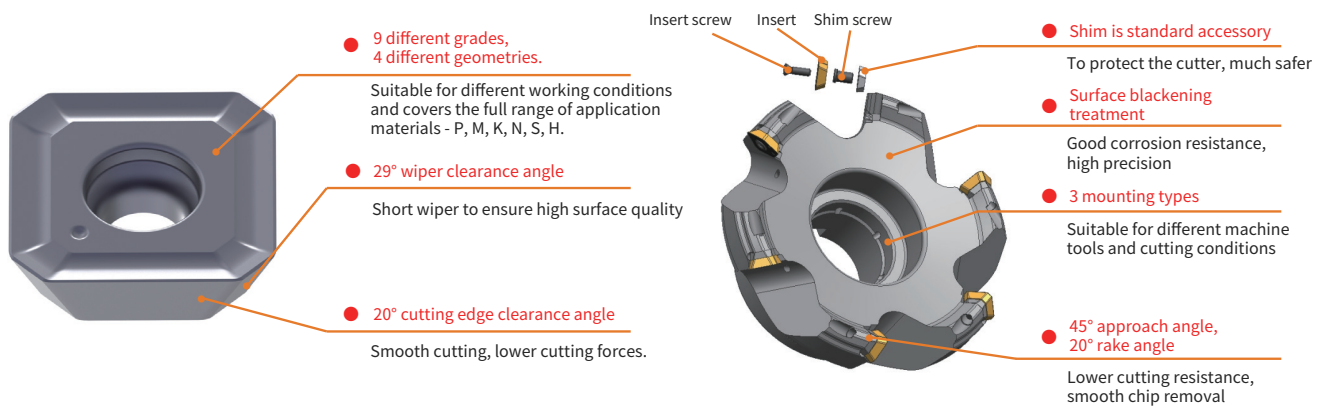




Product Introduction

Achteck launches AFM45-SE12, the face milling series for smooth cutting. The inserts are designed with diverse geometries, grades and optional wiper. We offer the cutters with a wide range of diameters and a variety of mounting types, such as Arbor, Cylindrical and Weldon.

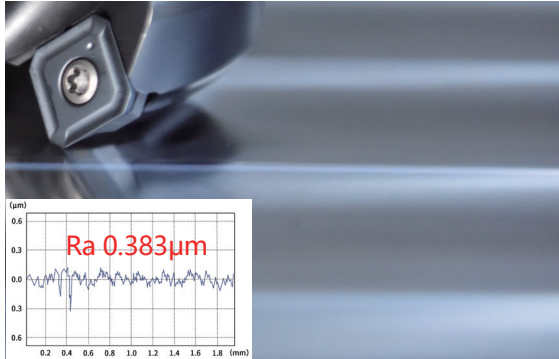
AFM45-SE12 provides excellent performance in roughing, semi-finishing and finishing of various materials.



Geometry Introduction

-FM2 For aluminium alloys	-MM3 Low cutting force	-MM4 Universal	-MR6 Strong cutting edge	-W Without chip breaker
<ul style="list-style-type: none"> Large rake angle, sharp, suitable for easy machining conditions. Cutting aluminium alloys. High precision inserts are ground and polished. 	<ul style="list-style-type: none"> Sharp geometry for easy machining conditions. Suitable for steel, stainless steel, and other difficult materials. Pressed inserts. 	<ul style="list-style-type: none"> Universal geometry for medium cutting. Wide range of application materials. Ground or pressed inserts available. 	<ul style="list-style-type: none"> Suitable for roughing and stable machining conditions. Wide range of application materials. Pressed inserts. 	<ul style="list-style-type: none"> Long edge wiper inserts without chip breaker. Can be collocated together with short wiper inserts together. High precision ground wiper inserts for excellent surface finish.

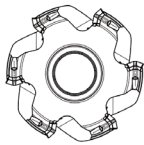
• Achteck Internal Testing



Cutter	AFM45-100-Z05-A32R-SE12-C-S
Insert	SEGT 12T3AEEN-MM4 AP251U
Vc [m/min]	220
fz [mm]	0.12
ap [mm]	0.5
Coolant	Emulsion
Ra [µm]	0.383

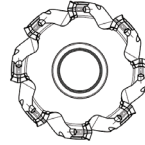
- From Achteck internal testing, the material is 4140.

• Cutter Options



Coarse Pitch

- Suitable for high fz, large ap with large chip removal.
- For machining steel, stainless steel



Close Pitch

- Suitable for low fz, small ap with small chip removal.
- For machining cast iron, superalloys, high hardness materials

• Attention! Optional Wiper Insert Installation

Follow figure 1 to mount the wiper insert, ensuring the wiper is in the working position.

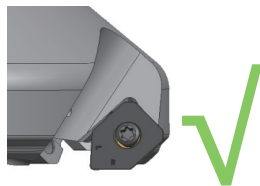


Figure 1

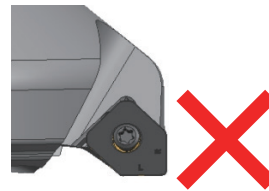
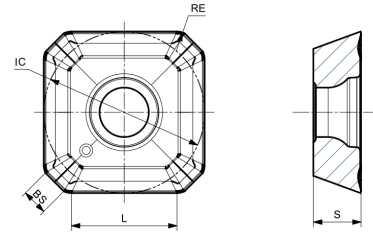





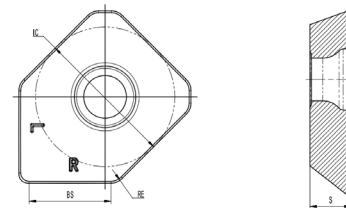



Figure 2

Insert


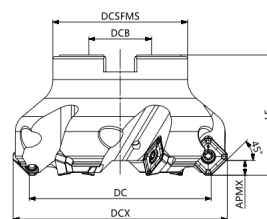
Insert shape	Product code	Dimension (mm)					P		M		K		N	S	H
		L	IC	S	RE	BS	AP251U	AC251P	AP351M	AP403M	AP251K	AC151K	AW100K	AP403S	AP151H
	SEGT 12T3AEEN-MM4	8.8	13.4	3.97	1.5	2.1	●				●				●
	SEMT 12T3AEEN-MM3	9.0	13.4	3.97	1.5	2.0	●		●	●	●	●		●	
	SEMT 12T3AEEN-MM4	8.8	13.4	3.97	1.5	2.0	●	●	●	●	●				
	SEMT 12T3AEEN-MR6	8.8	13.4	3.97	1.5	2.0				●	●	●			
	SEHT 12T3AEEN-FM2	9.2	13.4	3.97	1.5	2.3						●			

●: Stocked ○: Developing



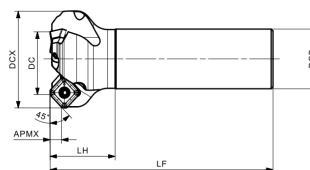
Insert shape	Product code	Dimension (mm)					P		M		K		N	S	H
		L	IC	S	RE	BS	AP251U	AC251P	AP351M	AP403M	AP251K	AC151K	AW100K	AP403S	AP151H
	SEHT 12T3AEEN-W	-	13.4	3.97	1.5	7.8	○					○			

●: Stocked ○: Developing

• Cutter


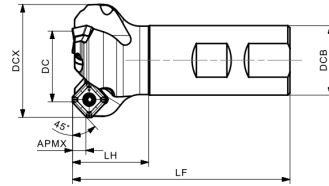
Cutter code	DCX	DC	DCB	DCSFMS	LF	APMX	Internal coolant	Z
AFM45-050-Z04-A22R-SE12-C-S	63	50	22	42	40	6		4
AFM45-063-Z04-A22R-SE12-C-S	76	63	22	47	40	6		4
AFM45-063-Z05-A22R-SE12-C-S	76	63	22	47	40	6		5
AFM45-080-Z04-A27R-SE12-C-S	93	80	27	58	50	6		4
AFM45-080-Z06-A27R-SE12-C-S	93	80	27	58	50	6		6
AFM45-100-Z05-A32R-SE12-C-S	113	100	32	66	50	6		5
AFM45-100-Z07-A32R-SE12-C-S	113	100	32	66	50	6		7
AFM45-125-Z06-A40R-SE12-C-S	138	125	40	85	63	6		6
AFM45-125-Z08-A40R-SE12-C-S	138	125	40	85	63	6		8
AFM45-160-Z07-A40R-SE12-S	173	160	40	110	63	6		7
AFM45-160-Z10-A40R-SE12-S	173	160	40	110	63	6		10
AFM45-200-Z08-A60R-SE12-S	213	200	60	140	63	6		8
AFM45-200-Z12-A60R-SE12-S	213	200	60	140	63	6		12
AFM45-250-Z10-A60R-SE12-S	263	250	60	160	63	6		10
AFM45-250-Z14-A60R-SE12-S	263	250	60	160	63	6		14



Note: with internal coolant
 without internal coolant





Cutter code	DC	DCX	DCB	LF	LH	APMX	Internal coolant	Z
AFM45-032-Z03-C32R-SE12-L120-C-S	32	45	32	120	35	6		3
AFM45-040-Z03-C32R-SE12-L120-C-S	40	53	32	120	35	6		3



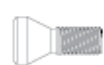
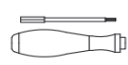

Note: with internal coolant
 without internal coolant



Cutter code	DC	DCX	DCB	LF	LH	APMX	Internal coolant	Z
AFM45-032-Z03-W32R-SE12-C-S	32	45	32	100	35	6		3
AFM45-040-Z03-W32R-SE12-C-S	40	53	32	100	35	6		3

Note:  with internal coolant
 without internal coolant

◆ Accessories

Cutter diameter (mm)	Shim	Shim screw	Insert screw	Insert wrench	Shim screw wrench
Φ32-250					
	S-SE12030	SS050085F	SP035120H	DT-TP15	LT-H3.5

Application Case

Case 1

Workpiece: Marine cylinder

Material: GGG50

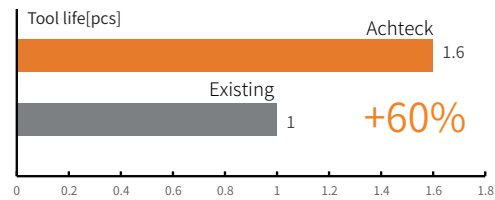
Insert: SEMT 12T3AEEN-MM4 AC151K

Cutter: AFM45-315-Z20-A60R-SE12-S

Machining: Face milling (roughing)



Parameter:	Existing	Achteck
Vc [m/min]	198	198
fz [mm]	0.25	0.25
ap [mm]	2.0	2.0
Coolant	DRY	DRY
Tool life [pcs]	1	1.6



Case 2

Workpiece: Bracket

Material: 316

Insert: SEMT 12T3AEEN-MM4 AP403M

Cutter: AFM45-160-Z10-A40R-SE12-S

Machining: Face milling (semi-finishing)



Parameter:	Existing	Achteck
Vc [m/min]	226	226
fz [mm]	0.22	0.25
ap [mm]	1.5	1.5
Coolant	WET	WET
Tool life [mm]	5525	6600

