PALEARICARLO

Shoulder milling tool for high helix

Alpha Mill-X

Ampliamento di gamma

KORLOY TECH-NEWS

- High helix cutting edge realizes high speed and high feed machining (15% higher speed than conventional tool's machining) and increases 20% higher productivity.
- Highly precise cutting edge ensures high quality surface finish in milling.

KORLOY

TECH-NEWS

Shoulder milling tool for high helix

Alpha Mill-X

The recent trend of cutting conditions has been changing to high speed and high feed conditions to decrease tooling cost from high productivity. However, without tool productivity and rigidity, chattering from impact in interrupted machining reduces surface finish and occurs tool fracture.

KORLOY introduces Alpha Mill-X ensuring high speed and high feed machining with high quality to increase productivity.

Alpha Mill-X with exclusive chip breaker and cutting edge with high rake angle reduces cutting load and controls chattering in machining.

The insert for the Alpha Mill-X is thicker than the conventional ones which increases tool rigidity and realizes stable machining from stable clamping system with flat flank surface clamping structure. In addition, wide wiper minor cutting edge and precise perpendicular cutting edge of Alpha Mill-X ensure milling with high quality.

The Alpha Mill-X with various sized nose-R and optimal grades for each cutting conditions increases productivity in high speed and feed machining with high performance.

Longer tool life

- New shape and optimal grade

Soft cutting and high speed and high feed machining

- High rake angle chip breaker and cutting edge

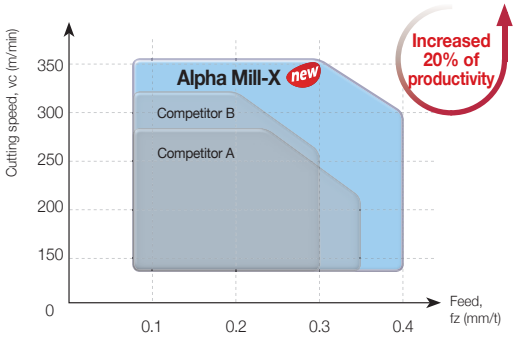
Stable machinability

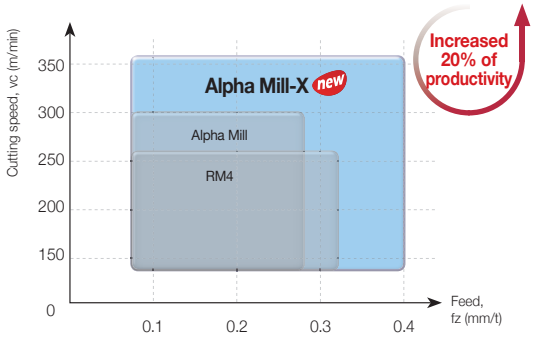
- Increased clamping force due to thicker insert and flat flank surface clamping structure

Good surface finish and perpendicularity

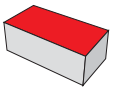
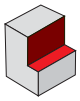
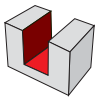
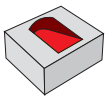
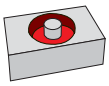
- Wide wiper minor cutting edge and precise cutting edge

Application range





Applications

Facing	Shouldering	Slotting	Ramping	Helical cutting
				

Code system

【Shank type】

AMX	S	032	R	-	2	C	32	-	150	-	AD17

AMX — Alpha Mill-X

S — Type
S: Shank

032 — Machining diameter
032: Ø32 mm

R — Oil hole & Hand
R: With Oil hole, right-handed
NR: Without oil hole, right-handed

2 — No. of tooth
2: 2 teeth

C — Shank type
C: Cylinder
W: Weldon

32 — Shank diameter
32: Ø32 mm

150 — Overall length
150: 150 mm

AD17 — Available insert
AD17: ADKT17
AD12: ADKT12
AD10: ADKT10

【Cutter type】

AMX	C	M	050	R	-	22	-	4	-	AD17

AMX — Alpha Mill-X

C — Type
C: Cutter

M — Arbor type
M: Metric
A: Inch
None: Asia

050 — Machining diameter
050: Ø50 mm

R — Oil hole & Hand
R: With Oil hole, right-handed
NR: Without oil hole, right-handed

22 — Internal diameter
22: Ø22 mm

4 — No. of tooth
4: 4 teeth

AD17 — Available insert
AD17: ADKT17
AD12: ADKT12
AD10: ADKT10

Insert features

High rake angle chip breaker
- Applied high rake angle
- Improved chip control

Max. ap

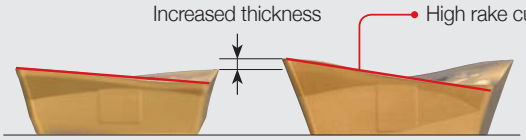
ADKT17: 16.5 mm
ADKT12: 11.5 mm
ADKT10: 9.5 mm

Proprietary relief surface shape
- High rigidity of insert

Flat clamping area
- Stable clamping in high speed and high feed machining

Applied minor cutting edge with a wiper function
- Minor cutting edge design optimized for excellent surface finish

High rake cutting edge
- Better surface toughness
- Lower cutting load



Conventional Alpha Mill
(APMT1604PDSR-MM)

Alpha Mill-X
(ADKT170608PESR-MM)

- Applying cutting edge with high rake angle: decreased cutting load
- Thicker insert: high rigidity of insert

▶ **Optimal for high speed and high feed machining**

Cutter features

High rake angle cutting edge
- Improved surface finish
- Decreased cutting load

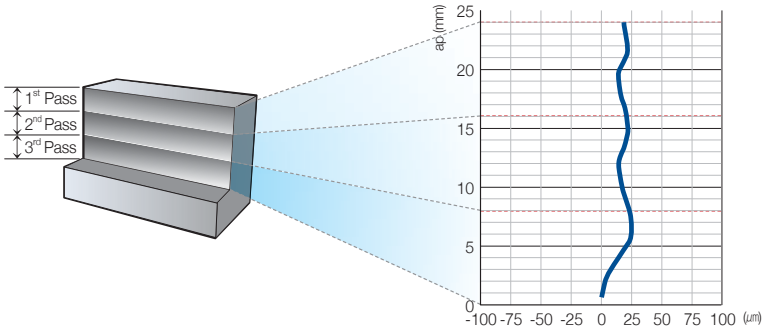
Wider chip pocket
- Maximized chip control
- Outstanding chip control in high speed and high feed machining

Perfect perpendicularity

Performance evaluation

Perpendicularity

- **Workpiece** Alloy steel (42CrMo4, HB200), 300(L)x200(W)x100(H)
- **Cutting conditions** vc (m/min) = 150, fz (mm/t) = 0.15, ap (mm) = 8 mmx3 Passes (Total 24 mm), ae (mm) = 5, dry
- **Tool** **Insert** ADKT170608PESR-MM (PC5300) **Holder** AMXS032R-3W32-125-AD17



[Graph of measured perpendicularities]

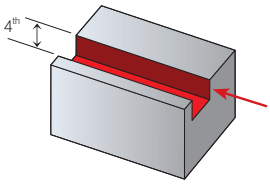
[Comparison picture of flank surface finish]

▶ Perpendicularity error is less than 30 ㎛.

Surface finish

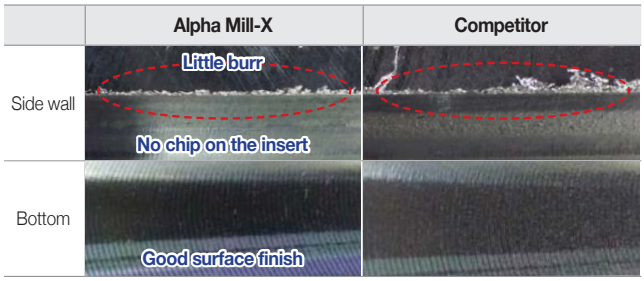
(* : DIN)

- **Workpiece** Alloy steel (34CrNiMo6*, HB200), 300(L)x200(W)x100(H)
- **Cutting conditions** vc (m/min) = 176, fz (mm/t) = 0.15, ap (mm) = 5 mmx4 Passes (Total 20 mm), ae (mm) = 50, dry
- **Tool** **Insert** ADKT170616PESR-MM (PC5300) **Holder** AMXCM050R-22-5-AD17



▶ Decreased burr

▶ Good surface finish on the side wall and bottom of the workpiece after machining

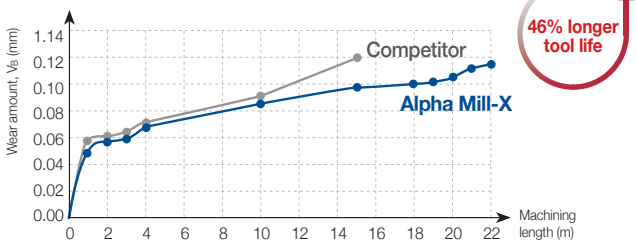


Wear resistance

- **Workpiece** Alloy steel (42CrMo4, HB200), 300(L)x200(W)x100(H)
- **Cutting conditions** vc (m/min) = 200, fz (mm/t) = 0.17, ap (mm) = 5, ae (mm) = 20, dry
- **Tool** **Insert** ADKT170608PESR-MM (PC5300) **Holder** AMXS032R-3W32-125-AD17

[Alpha Mill-X]

[Competitor]



Recommended grades and chip breakers

(● : 1st Recommendation)

C/B	Cutting edge	P				M		K		N		S	
		Low carbon steel/ Mild steel		High carbon steel/ Alloy steel		Stainless steel		Cast iron		Non-ferrous metal		HRSA	
		C/B	Grade	C/B	Grade	C/B	Grade	C/B	Grade	C/B	Grade	C/B	Grade
ML		-	● PC3700 ○ PC5300 ○ PC5400 ○ NCM535	-	● PC3700 ○ PC5300 ○ PC5400 ○ NCM535	●	● PC5300 ○ PC5400 ○ PC9540	-	● PC6510 ○ PC5300 ○ PC5400 ○ NCM535	-	-	●	● UPC845 ○ UNC840 ○ PC5300 ○ PC5400
MM		●	● PC3700 ○ PC5300 ○ PC5400 ○ NCM535	●	● PC3700 ○ PC5300 ○ PC5400 ○ NCM535	-	● PC5300 ○ PC5400 ○ PC9540	●	● PC6510 ○ PC5300 ○ PC5400 ○ NCM535	-	-	-	● UPC845 ○ UNC840 ○ PC5300 ○ PC5400

Recommended cutting conditions

【In face machining and shouldering】

Workpiece		Grade	Cutting speed vc (m/min)	Feed, fz (mm/t)		
				ADKT17	ADKT12	ADKT10
P	Steel	PC5300	150-240	0.3-0.05	0.25-0.05	0.2-0.05
		PC5400	130-210			
		PC3700	160-270			
		NCM535	250-350			
M	Stainless steel	PC5300	90-150	0.25-0.05	0.2-0.05	0.15-0.05
		PC5400	70-120			
		PC9540	50-120			
K	Cast iron	PC6510	150-200	0.35-0.08	0.3-0.08	0.25-0.08
		PC5300	120-200			
		NCM535	200-300			
S	HRSA	PC5300	40-70	0.2-0.05	0.15-0.05	0.1-0.05
		PC5400	30-50			
		UPC845	20-60			
		UNC840	30-60			

※ The above data refer to general cutting conditions and can be adjustable up to 350 m/min and 0.4 mm/t depending on user environment.

【In grooving, ramping and helical machining】

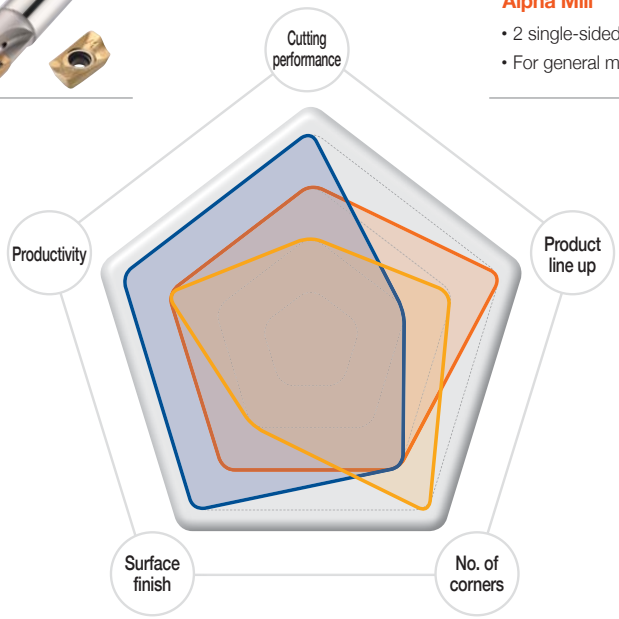
Workpiece		Grade	Cutting speed vc (m/min)	Feed, fz (mm/t)		
				ADKT17	ADKT12	ADKT10
P	Steel	PC5300	150-240	0.15-0.05	0.15-0.05	0.15-0.05
		PC5400	130-210			
		PC3700	160-270			
		NCM535	250-350			
M	Stainless steel	PC5300	90-150	0.15-0.05	0.15-0.05	0.15-0.05
		PC5400	70-120			
		PC9540	50-120			
K	Cast iron	PC6510	150-250	0.2-0.08	0.2-0.08	0.2-0.08
		PC5300	120-200			
		NCM535	200-300			
S	HRSA	PC5300	40-70	0.15-0.05	0.15-0.05	0.1-0.05
		PC5400	30-50			
		UPC845	20-60			
		UNC840	30-60			

※ In deep grooving, set the ap under 5 mm and use coolant and air.

Shoulder milling tool selection guide

Alpha Mill-X new
- Higher productivity
- Lower cutting load

Alpha Mill
- 2 single-sided corners
- For general machining

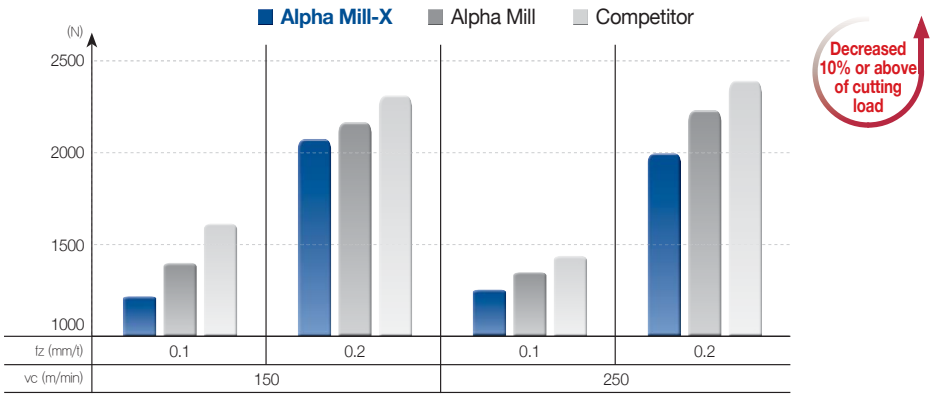


— Alpha Mill-X
— Alpha Mill
— RM4

RM4
- 4 double-sided corners
- High cost efficiency

Tools	Cutting performance	Line up	No. of corners	Surface finish	Productivity
Alpha Mill-X new	★★★★	★★	★★★	★★★★	★★★★
Alpha Mill	★★★	★★★★	★★★	★★★	★★★
RM4	★★	★★★	★★★★	★★	★★★

Cutting load

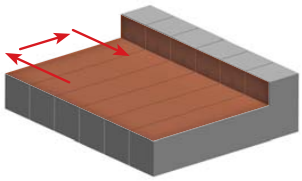


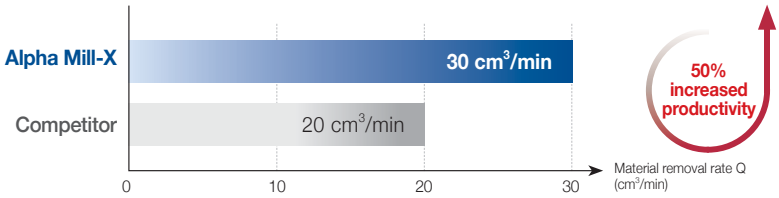
Decreased 10% or above of cutting load

Application examples

Alloy steel (42CrMo4)

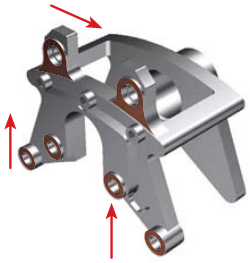
- **Workpiece use** Lathe holder
- **Cutting conditions** vc (m/min) = 163, fz (mm/t) = 0.11, ap (mm) = 1.5x4 Passes, ae (mm) = 40, wet
- **Tool** **Insert** ADKT170616PESR-MM (PC5300) **Holder** AMXCM080R-27-7-AD17

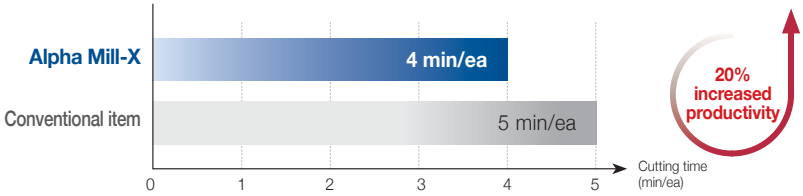




Ductile cast iron (700-2)

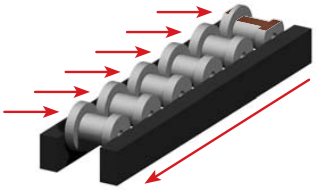
- **Workpiece use** Break carrier
- **Cutting conditions** vc (m/min) = 118, fz (mm/t) = 0.1 ~ 0.2, ap (mm) = 2 (Finishing), 4x2 Passes (Roughing), wet
- **Tool** **Insert** ADKT170608PESR-ML (PC5300) **Holder** AMXCM063R-22-6-AD17

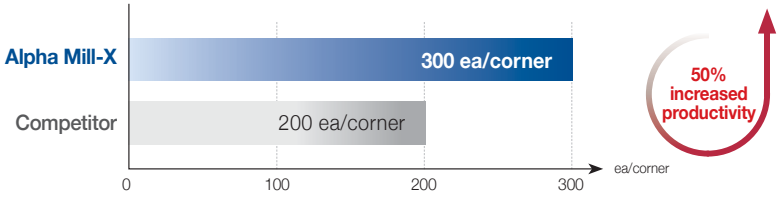




Alloy steel (34CrMo4)

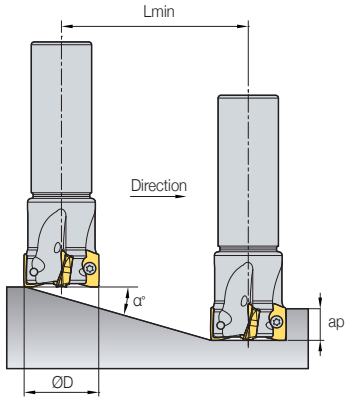
- **Workpiece use** Automobile suspension parts
- **Cutting conditions** vc (m/min) = 296, fz (mm/t) = 0.09, ap (mm) = 2.0x2 Passes, ae (mm) = 40 ~ 50, wet
- **Tool** **Insert** ADKT170616PESR-MM (PC5300) **Holder** AMXCM063R-22-6-AD17



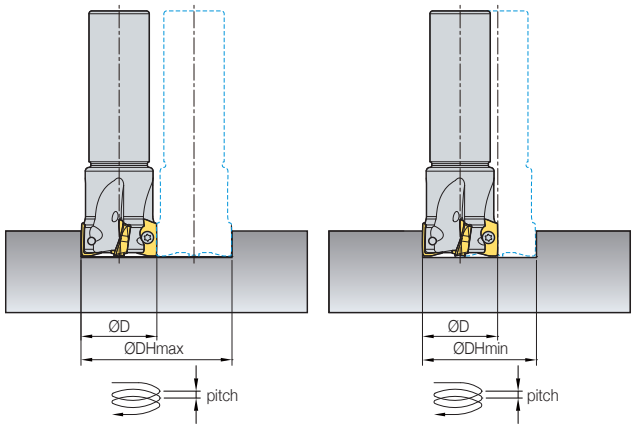


Ramping and helical cutting

Ramping



Helical cutting



(mm)

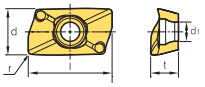
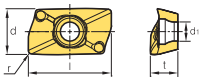
Designation	Tool dia. ØD	ap	Ramping		Blind hole helical cutting				Through hole helical cutting	
			Max. rake angle α°	Lmin	Min. desirable hole dia. ØDHmin	Max. pitch dmax	Max. desirable hole dia. ØDHmax	Max. pitch dmax	Min. desirable hole dia. ØDHmin	Max. pitch dmax
ADKT17	20	16.5	13	71	30	7.0	38	8.9	21	4.8
	25	16.5	8.0	117	40	5.7	48	6.8	31	4.3
	32	16.5	3.7	255	54	3.5	62	4.0	45	2.9
	33	16.5	3.6	262	56	3.5	64	4.1	47	2.9
	40	16.5	2.6	363	70	3.2	78	3.6	61	2.8
	50	16.5	1.9	497	90	3.0	98	3.3	81	2.7
	63	16.5	1.3	727	116	2.6	124	2.8	107	2.4
	80	16.5	1.1	859	150	2.9	158	3.0	141	2.7
	100	16.5	0.7	1350	190	2.3	198	2.4	181	2.2
	125	16.5	0.5	1891	240	2.1	248	2.2	231	2.0
ADKT12	18	11.5	7.0	98	29	3.6	34	4.2	23	2.8
	20	11.5	5.5	125	33	3.2	38	3.7	27	2.6
	25	11.5	3.5	196	43	2.7	48	3.0	37	2.3
	32	11.5	2.5	275	57	2.5	62	2.7	51	2.2
	33	11.5	2.4	286	59	2.5	64	2.7	53	2.2
	40	11.5	1.5	458	73	1.9	78	2.1	67	1.7
	50	11.5	1.2	573	93	2.0	98	2.1	87	1.8
	63	11.5	1.0	687	119	2.1	124	2.2	113	2.0
	80	11.5	0.7	982	153	1.9	158	1.9	147	1.8
ADKT10	16	9.5	4.5	121	28	2.2	31	2.5	24	1.9
	18	9.5	3.5	155	32	2.0	35	2.2	28	1.7
	20	9.5	3.0	181	36	1.9	39	2.1	32	1.7
	25	9.5	2.2	247	46	1.8	49	1.9	42	1.6
	32	9.5	1.5	363	60	1.6	63	1.7	56	1.5
	33	9.5	1.4	389	62	1.5	65	1.6	58	1.4
	40	9.5	1.2	454	76	1.6	79	1.7	72	1.5
	50	9.5	0.8	680	96	1.3	99	1.4	92	1.3
	63	9.5	0.6	907	122	1.3	125	1.3	118	1.2
	80	9.5	0.5	1089	156	1.4	159	1.4	152	1.3

• In ramping and helical machining, use coolant and air.

• Lmin : Cutting length in machining with Min. rake angle
α° : Rake angle for ramping
ap : Depth of cut in axial direction

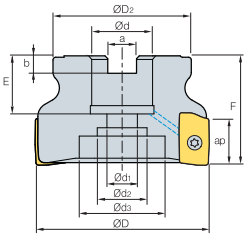
$$Lmin = \frac{ap}{\tan \alpha^\circ} \text{ (mm)}$$

Inserts

Inserts	Designation		Coated								Dimensions (mm)					Geometries
			NCM535	PC3700	PC6510	PC9540	PC5300	PC5400	UNC840	UPC845	l	d	t	r	d_1	
	ADKT	10T304PEER-ML	●	●	●	○	●	●	●	●	11.7	6.424	3.819	0.4	2.8	
		120408PESR-ML	●	●	●	●	●	●	●	●	14.5	7.813	4.824	0.8	3.4	
		170608PESR-ML	●	●	●	●	●	●	●	●	19.665	10.843	6.529	0.8	4.5	
	ADKT	10T304PESR-MM	●	●	●	○	●	○	●	●	11.7	6.424	3.819	0.4	2.8	
		10T308PESR-MM					●	○			11.7	6.424	3.819	0.8	2.8	
		10T312PESR-MM					○	●			11.7	6.424	3.819	1.2	2.8	
		120408PESR-MM	●	●	●	●	●	●	●	●	14.5	7.813	4.824	0.8	3.4	
		120412PESR-MM		●	●		●	●	●	●	14.5	7.813	4.824	1.2	3.4	
		120416PESR-MM		●	●		●	●	●	●	14.5	7.813	4.824	1.6	3.4	
		170604PESR-MM		●			●				19.665	10.843	6.529	0.4	4.5	
		170608PESR-MM	●	●	●	●	●	●	●	●	19.665	10.843	6.529	0.8	4.5	
		170616PESR-MM					●	●			19.665	10.843	6.529	1.6	4.5	
		170620PESR-MM					●	●			19.665	10.843	6.529	2.0	4.5	

●: Stock item ○: In stock (December. 2020) None: Order made

AMXCM



AA 90°

- AR: 8°
- RR: -10°~-3°

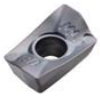
(mm)

Designation		Stock		ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	kg	Available insert
AMXCM	040R-16-3-AD17	●	3	40	35	16	9	14	-	8.4	5.6	19	40	16.5	0.18	ADKT17
	040R-16-4-AD17	●	4	40	35	16	9	14	-	8.4	5.6	19	40	16.5	0.18	
	050R-22-4-AD17	●	4	50	42	22	11	18	-	10.4	6.3	20	40	16.5	0.23	
	050R-22-5-AD17	●	5	50	42	22	11	18	-	10.4	6.3	20	40	16.5	0.20	
	063R-22-5-AD17	●	5	63	49	22	11	18	-	10.4	6.3	20	40	16.5	0.44	
	063R-22-6-AD17	●	6	63	49	22	11	18	-	10.4	6.3	20	40	16.5	0.49	
	080R-27-6-AD17	●	6	80	57	27	14	25	38	12.4	7	23	50	16.5	0.88	
	080R-27-7-AD17	●	7	80	57	27	14	25	38	12.4	7	23	50	16.5	0.90	
	100R-32-8-AD17	●	8	100	70	32	18	28	45	14.4	8	28	63	16.5	1.76	
	100R-32-10-AD17	●	10	100	70	32	18	28	45	14.4	8	28	63	16.5	1.68	
	125R-40-8-AD17	●	8	125	90	40	22	32	54	16.4	9	30	63	16.5	2.89	
	125R-40-10-AD17	●	10	125	90	40	22	32	54	16.4	9	30	63	16.5	4.83	

●: Stock item None: Order made

Available inserts

ADKT-ML



ADKT-MM

Designation		Coated							
		NCM535	PC3700	PC6510	PC9540	PC5300	PC5400	UNC840	UPC845
ADKT	170608PESR-ML	●	●	●	●	●	●	●	●
	170604PESR-MM		●			●			
	170608PESR-MM	●	●	●	●	●	●	●	●
	170616PESR-MM					●	●		
	170620PESR-MM					●	●		

Available arbors

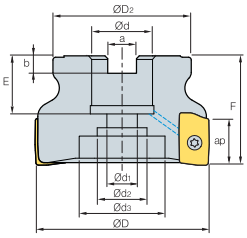
Designation		Ød	Available arbors
AMXCM	040R-16-□-AD□□	16	BT□□-FMC16-□□
	050R-22-□-AD□□	22	BT□□-FMC22-□□
	063R-22-□-AD□□		

Designation		Ød	Available arbors
AMXCM	080R-27-□-AD□□	27	BT□□-FMC27-□□
	100R-32-□-AD□□	32	BT□□-FMC32-□□
	125R-40-□-AD□□	40	BT□□-FMC40-□□

Parts

Specification	Screw	Wrench
Ø40~Ø125	FTKA0408	TW15S

AMXCM



AA 90°

• AR: 8°
• RR: -10°~-3°

(mm)

Designation		Stock		ØD	ØD2	Ød	Ød1	Ød2	Ød3	a	b	E	F	ap	kg	Available insert
AMXCM	040R-16-4-AD12	●	4	40	35	16	9	14	-	8.4	5.6	19	40	11.5	0.18	ADKT12
	040R-16-5-AD12	●	5	40	35	16	9	14	-	8.4	5.6	19	40	11.5	0.16	
	050R-22-5-AD12	●	5	50	42	22	11	18	-	10.4	6.3	20	40	11.5	0.23	
	050R-22-7-AD12	●	7	50	42	22	11	18	-	10.4	6.3	20	40	11.5	0.20	
	063R-22-6-AD12	●	6	63	49	22	11	18	-	10.4	6.3	20	40	11.5	0.44	
	063R-22-7-AD12	●	7	63	49	22	11	18	-	10.4	6.3	20	40	11.5	0.49	
	080R-27-7-AD12	●	7	80	57	27	14	25	38	12.4	7	23	50	11.5	0.88	
	080R-27-8-AD12	●	8	80	57	27	14	25	38	12.4	7	23	50	11.5	0.90	
	040R-16-5-AD10	●	5	40	35	16	9	14	-	8.4	5.6	19	40	9.5	0.18	ADKT10
	040R-16-6-AD10	●	6	40	35	16	9	14	-	8.4	5.6	19	40	9.5	0.18	
	050R-22-6-AD10	●	6	50	42	22	11	18	-	10.4	6.3	20	40	9.5	0.23	
	050R-22-7-AD10	●	7	50	42	22	11	18	-	10.4	6.3	20	40	9.5	0.20	
	063R-22-7-AD10	●	7	63	49	22	11	18	-	10.4	6.3	20	40	9.5	0.44	
	063R-22-8-AD10	●	8	63	49	22	11	18	-	10.4	6.3	20	40	9.5	0.49	
	080R-27-8-AD10	●	8	80	57	27	14	25	38	12.4	7	23	50	9.5	0.88	
	080R-27-9-AD10	●	9	80	57	27	14	25	38	12.4	7	23	50	9.5	0.90	

●: Stock item ○: In stock (December. 2020) None: Order made

Available inserts

ADKT-ML

ADKT-MM

Designation		Coated							
		NCM535	PC3700	PC6510	PC9540	PC5300	PC5400	UNC840	UPC845
ADKT	120408PESR-ML	●	●	●	●	●	●	●	●
	120408PESR-MM	●	●	●	●	●	●	●	●
	120412PESR-MM		●	●		●	●	●	●
	120416PESR-MM		●	●		●	●	●	●
ADKT	10T304PEER-ML	●	●	●	○	●	●	●	●
	10T304PESR-MM	●	●	●	○	●	○	●	●
	10T308PESR-MM					●	○		
	10T312PESR-MM					○	●		

Available arbors

Designation		Ød	Available arbors
AMXCM	040R-16-□-AD□□	16	BT□□-FMC16-□□
	050R-22-□-AD□□	22	BT□□-FMC22-□□

Designation		Ød	Available arbors
AMXCM	063R-22-□-AD□□	22	BT□□-FMC22-□□
	080R-27-□-AD□□	27	BT□□-FMC27-□□

Parts

Specification	Screw	Wrench
Ø40~Ø80 (12 type)	FTNA0306	TW09S
Ø40~Ø80 (10 type)	FTKA02555S	TW08S

AMXS

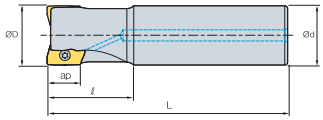


Fig. 1

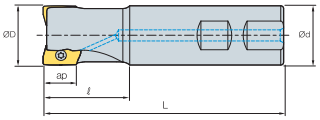


Fig. 2

• AR: 8°
• RR: -10°~-3°

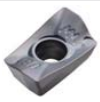
(mm)

Designation		Stock	⊙	ØD	Ød	ℓ	L	ap	kg	Available insert	Fig.
AMXS	020R-1W20-100-AD17	●	1	20	20	35	100	16.5	0.170	ADKT17	2
	020R-1C20-200-AD17	●	1	20	20	35	200	16.5	0.360		1
	025R-2W25-115-AD17	●	2	25	25	35	115	16.5	0.610		2
	025R-2C25-200-AD17	●	2	25	25	35	200	16.5	0.450		1
	032R-3W32-125-AD17	●	3	32	32	45	125	16.5	0.620		2
	032R-3C32-200-AD17	●	3	32	32	45	200	16.5	1.050		1
	033R-3W32-125-AD17	●	3	33	32	45	125	16.5	0.620		2
	033R-3C32-200-AD17	●	3	33	32	45	200	16.5	1.050		1
	040R-3W32-130-AD17	●	3	40	32	50	130	16.5	0.750		2
	040R-3C32-200-AD17	●	3	40	32	50	200	16.5	1.170		1
	040R-4W32-130-AD17	●	4	40	32	50	130	16.5	0.740		2
	040R-4C32-200-AD17	●	4	40	32	50	200	16.5	1.200		1

●: Stock item None: Order made

Available inserts

ADKT-ML



ADKT-MM

Designation		Coated							
		NCM535	PC3700	PC6510	PC9540	PC5300	PC5400	UNC840	UPC845
ADKT	170608PESR-ML	●	●	●	●	●	●	●	●
	170604PESR-MM		●			●			
	170608PESR-MM	●	●	●	●	●	●	●	●
	170616PESR-MM					●	●		
	170620PESR-MM					●	●		

Parts

Specification	Screw	Wrench
Ø20~Ø40	FTKA0408	TW15S

AMXS

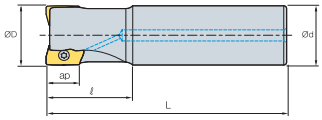


Fig. 1

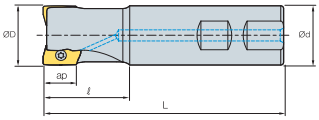


Fig. 2

• AR: 8°
• RR: -10°~-3°

(mm)

	Designation	Stock	○	ØD	Ød	ℓ	L	ap	kg	Available insert	Fig.
AMXS	018R-2W16-100-AD12	●	2	18	16	35	100	11.5	0.120	ADKT12	2
	018R-2C16-200-AD12	●	2	18	16	35	200	11.5	0.210		1
	020R-2W20-100-AD12	●	2	20	20	35	100	11.5	0.250		2
	020R-2C20-200-AD12	●	2	20	20	35	200	11.5	0.490		1
	025R-3W25-115-AD12	●	3	25	25	40	115	11.5	0.400		2
	025R-3C25-200-AD12	●	3	25	25	40	200	11.5	0.590		1
	032R-4W32-125-AD12	●	4	32	32	45	125	11.5	0.700		2
	032R-4C32-200-AD12	●	4	32	32	45	200	11.5	1.000		1
	040R-4W32-130-AD12	●	4	40	32	50	130	11.5	1.050		2
	040R-4C32-200-AD12	●	4	40	32	50	200	11.5	1.200		1
	016R-2W16-90-AD10	●	2	16	16	25	90	9.5	0.110	ADKT10	2
	016R-2C16-180-AD10	●	2	16	16	25	180	9.5	0.190		1
	018R-2W16-100-AD10	●	2	18	16	35	100	9.5	0.120		2
	018R-2C16-200-AD10	●	2	18	16	35	200	9.5	0.210		1
	020R-3W20-100-AD10	●	3	20	20	35	100	9.5	0.250		2
	020R-3C20-200-AD10	●	3	20	20	35	200	9.5	0.490		1
	025R-4W25-115-AD10	●	4	25	25	40	115	9.5	0.400		2
	025R-4C25-200-AD10	●	4	25	25	40	200	9.5	0.590		1
	032R-4W32-125-AD10	●	4	32	32	45	125	9.5	0.700		2
	032R-4C32-200-AD10	●	4	32	32	45	200	9.5	1.000		1
	040R-5W32-130-AD10	●	5	40	32	50	130	9.5	1.050		2
	040R-5C32-200-AD10	○	5	40	32	50	200	9.5	1.200		1

●: Stock item ○: In stock (December. 2020) None: Order made

Available inserts

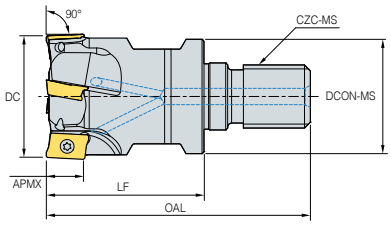
ADKT-ML

ADKT-MM

	Designation	Coated							
		NCM535	PC3700	PC6510	PC9540	PC5300	PC5400	UNC840	UPC845
ADKT	120408PESR-ML	●	●	●	●	●	●	●	●
	120408PESR-MM	●	●	●	●	●	●	●	●
	120412PESR-MM		●	●		●	●	●	●
	120416PESR-MM		●	●		●	●	●	●
ADKT	10T304PEER-ML	●	●	●	○	●	●	●	●
	10T304PESR-MM	●	●	●	○	●	○	●	●
	10T308PESR-MM					●	○		
	10T312PESR-MM					○	●		

Parts

Specification	Screw	Wrench
		
Ø18~Ø40 (12 type)	FTNA0306	TW09S
Ø16~Ø40 (10 type)	FTKA02555S	TW08S



90°

(mm)

	Designation	Stock	CICT	DC	DCON-MS	LF	OAL	CZC-MS	APMX	kg
AMXM	020HR-M10-3-AD10	●	3	20	18	30	52	M10	9.5	0.10
	025HR-M12-4-AD10	●	4	25	21	35	57	M12	9.5	0.12
	032HR-M16-5-AD10	●	5	32	28	39	64	M16	9.5	0.20
	025HR-M12-3-AD12	●	3	25	21	35	57	M12	11.5	0.13
	032HR-M16-4-AD12	●	4	32	29	42	64	M16	11.5	0.15

● : Stock item

Available inserts

ADKT-ML

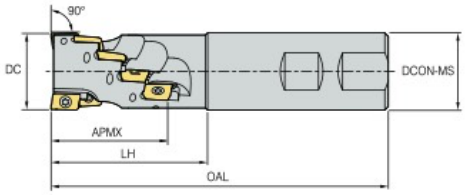
ADKT-MM

Type	Designation		Cermet	Coated											Uncoated		Page
			CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6100	PC9530	PC9540	PC5300	PC5400	G10	H01	
10 type	ADKT	10T304PEER-ML					●				●	●		●	●	●			B4
		10T304PESR-MM					●				●	●		●	●	●			
		10T308PESR-MM													●	●			
		10T312PESR-MM														●			
12 type	ADKT	120408PESR-ML					●				●	●		●	●	●			
		120408PESR-MM					●				●	●		●	●	●			
		120412PESR-MM									●	●			●	●			
		120416PESR-MM									●	●			●	●			

Parts

Specification	Screw	Wrench
Ø20~Ø25(10 type)	FTKA02555S	TW08S
Ø25~Ø32(12 type)	FTNA0306	TW08S

Available inserts **B4**



KAPR 90°

• GAMP : 7°~9°
• GAMF : −13°~−10°

(mm)

	Designation	Stock	CICT	DC	DCON-MS	LH	OAL	CICT-TOT	APMX	kg
AMXM-M	020R-2W20-100-AD10	●	2	20	20	45	100	6	27	0.40
	025R-3W25-110-AD10	●	3	25	25	50	110	12	36	0.50
	032R-3W32-120-AD12	●	3	32	32	60	120	12	43	0.85
	040R-4W32-150-AD12	●	4	40	32	87	150	24	65	1.15

● : Stock item

Available inserts

ADKT-ML

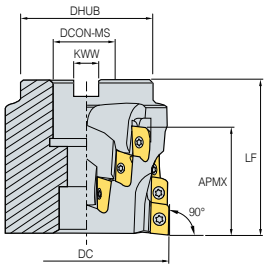
ADKT-MM

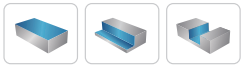
Type	Designation		Cermet	Coated											Uncoated		Page
			CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6100	PC9530	PC9540	PC5300	PC5400	G10	H01	
10 type	ADKT	10T304PEER-ML					●				●	●		●	●	●			B4
		10T304PESR-MM					●				●	●		●	●	●			
		10T308PESR-MM													●	●			
		10T312PESR-MM														●			
12 type	ADKT	120408PESR-ML					●				●	●		●	●	●			
		120408PESR-MM					●				●	●		●	●	●			
		120412PESR-MM									●	●			●	●			
		120416PESR-MM									●	●			●	●			

Parts

Specification	Screw	Wrench
Ø20~Ø25(10 type)	FTKA02555S	TW08S
Ø25~Ø32(12 type)	FTNA0306	TW08S

Available inserts **B4**





KAPR 90°

- GAMP : 9°
- GAMF : –9°~–5°

(mm)

	Designation	Stock	CICT	DC	DHUB	DCON-MS	LF	CICT-TOT	APMX	kg
AMXCM	040M-16-4-AD12	•	4	40	38	16	65	16	43	0.5
	050M-27-5-AD12	•	5	50	48	27	65	20	43	0.6
AMXCM	063M-27-4-AD17	•	4	63	60	27	85	16	60	0.9
	080M-32-5-AD17	•	5	80	77	32	85	20	60	1.3

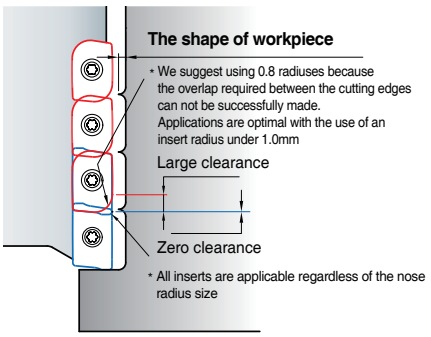
Available inserts

ADKT-ML

ADKT-MM

Type	Designation		Cermet	Coated												Uncoated		Page
			CN30	NC5330	NCM325	NCM335	NCM535	NCM545	PC2505	PC2010	PC3700	PC6100	PC9530	PC9540	PC5300	PC5400	G10	H01	
12 type	ADKT	120408PESR-ML					•				•	•		•	•	•			B4
		120408PESR-MM					•				•	•		•	•	•			
		120412PESR-MM									•	•			•	•			
		120416PESR-MM									•	•			•	•			
17 type	ADKT	170604PESR-MM									•				•				
		170608PESR-MM/ML					•				•	•		•	•	•			
		170616PESR-MM													•	•			
		170620PESR-MM													•	•			

Caution when clamping the inserts



Parts

Specification	Screw	Wrench
Ø40~Ø50(12 type)	FTNA0306	TW08S
Ø63~Ø80(17 type)	FTKA0408	TW15S

Available inserts **B4** Available arbors and bolt **E96**

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