



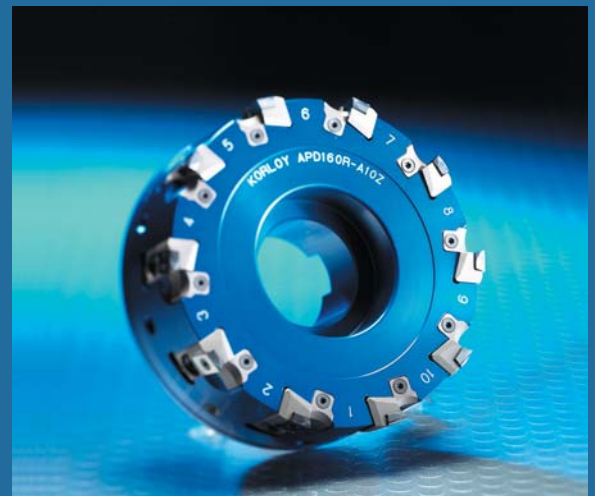
Aluminum Body

High speed & high efficiency Aluminum alloy milling tool

Aero Mill

Features

- Light Aluminum Body.
 - Weight : 50% of steel body.
 - High speed cutting, low power machine.
 - Easy handling.
- Aluminum precision cutting tool.
- Rigid body adopting high tensile aluminum.
- Locator for excellent durability.
- Tungsten carbide tool and PCD tool available.
- High rake angle : low cutting resistance.
- Balance level : G2.5



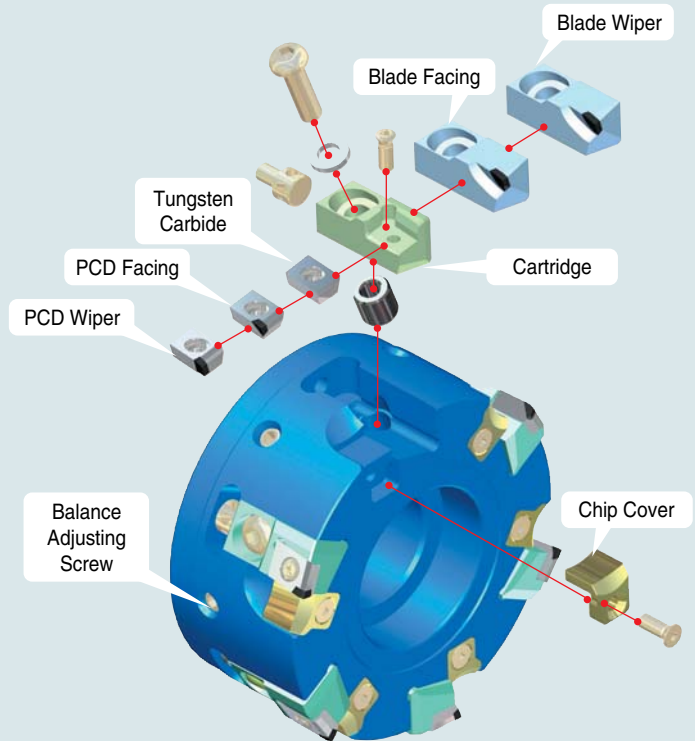


Aero Mill

Inner coolant system | Coolant bolt | Coolant cover

Aero mill

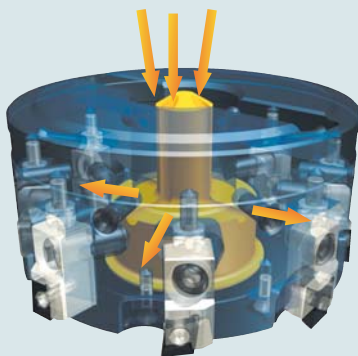
- Aero Mill, preventing overload on the axis, is suitable for all kinds of high speed machining.
- The use of insert-based and blade-based cutters allows a wider range of tooling.
- From finishing to roughing application available thanks to wide chip pocket area.
- High tensile aluminum alloy body guarantees excellent performance.
- Chip cover protects the body from the breakage of chip action.



Inner coolant system

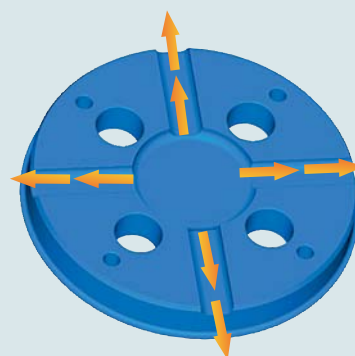
- **The coolant injection is directed toward the cutting area of the insert, in order to guarantee higher chip evacuation performance and a superb cooling effect.**
- **Coolant bolt for under diameter 6 inch, coolant cover for over diameter 8 inch**
 - ※ **Note** - Extra charge for the coolant bolt and cover.
 - Through coolant type arbor applicable only.

Coolant bolt



Ø 3 ~ Ø6 (inch)

Coolant cover



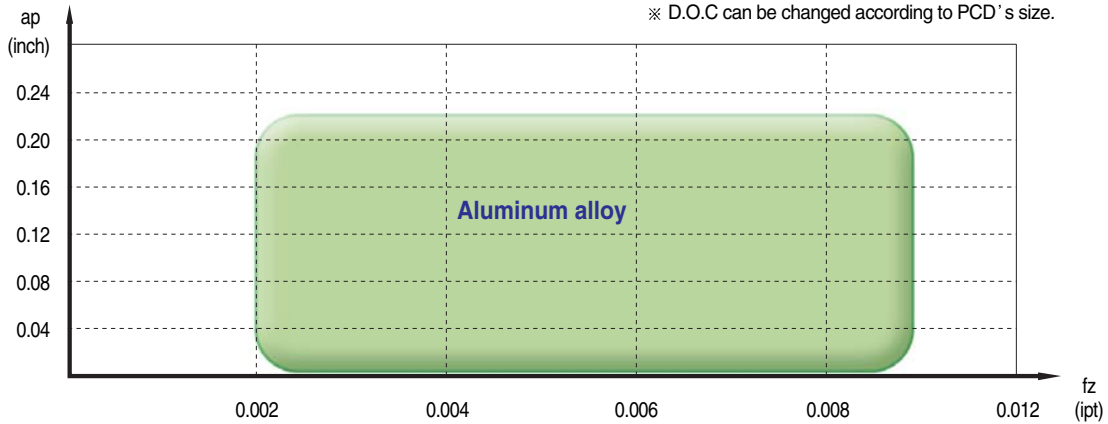
Over Ø8(inch)



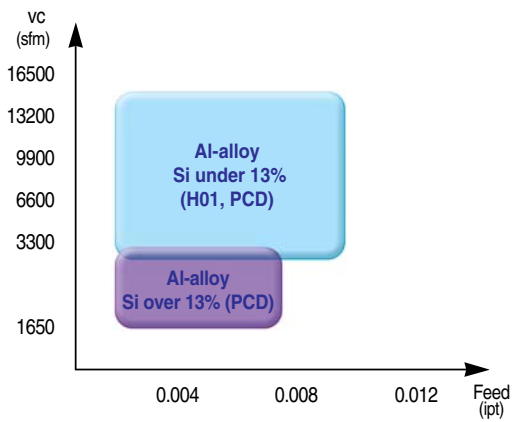
Aero Mill

Application | Cutting speed | Max R.P.M. | Surface roughness

Application



Cutting speed



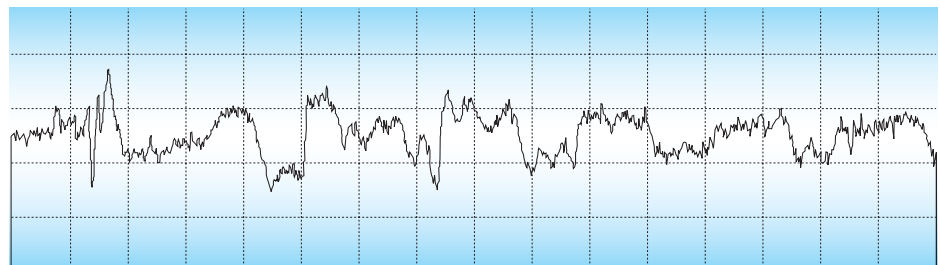
Max R.P.M.

Diameter	Max R.P.M
Ø 3 "	16,000
Ø 4 "	15,000
Ø 5 "	12,500
Ø 6 "	10,000
Ø 8 "	8,000
Ø 10 "	6,500
Ø 12 "	5,000

Surface roughness

- Machine : PCV620
- Cutter : APDA400R-A6Z (6 teeth)
- n=5000 min⁻¹
- vc = 5200 sfm
- Workpiece : A6061
- Insert : CDEW1204R-XCF(H01)
- vf = 120 inch/min
- fz = 0.004 ipt
- ap = 0.02 inch

- Rmax : 2.1 μm
- Rz : 1.6 μm
- Ra : 0.3 μm



0 inch

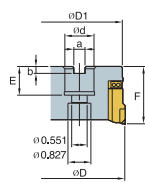
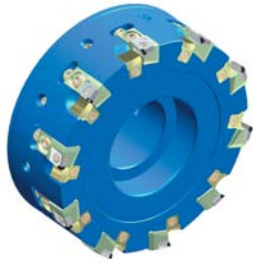
0.170 inch



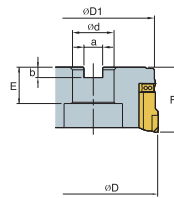
Aero Mill

APDA000-A Cutter | Aero Mill Code System

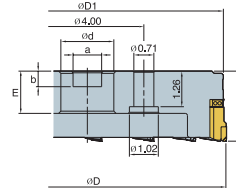
APDA000-A Cutter



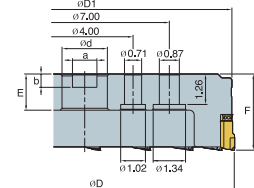
Ø 3 "



Ø 4 " ~ Ø 6 "



Ø 8 " ~ Ø 10 "

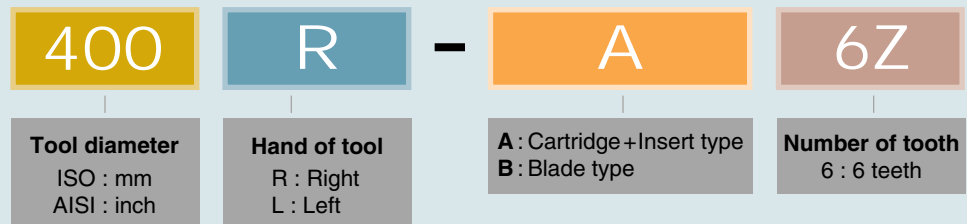
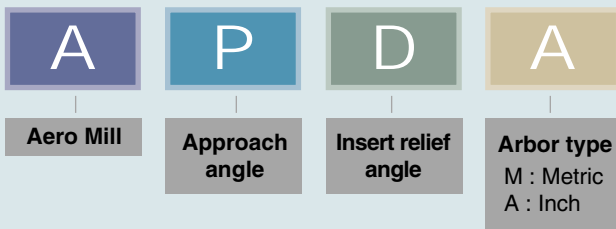


Ø 12 "

Designation	Stock		øD	øD ₁	ød	a	b	E	F	⊙	lb
	R	L									
APDA 300R/L-A6Z			3.0	2.843	1.0	0.375	0.248	0.866	2.0	6	0.3
400R/L-A6Z			4.0	3.803	1.25	0.5	0.319	0.866	2.0	6	0.4
500R/L-A8Z			5.0	4.804	1.5	0.625	0.394	1.181	2.5	8	0.8
600R/L-A10Z			6.0	5.803	2.0	0.75	0.433	1.181	2.5	10	1.3
800R/L-A12Z			8.0	7.803	2.5	1.0	0.551	1.496	2.5	12	1.8
1000R/L-A16Z			10.0	9.803	2.5	1.0	0.551	1.496	2.5	16	2.9
1200R/L-A18Z			12.0	11.803	2.5	1.0	0.551	1.496	3.125	18	5.1

● Stock item, ○ Under preparing for stock

Aero Mill Code System

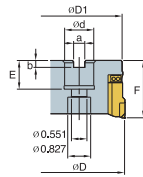




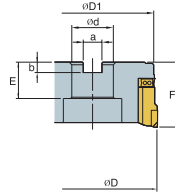
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APDA000-B Cutter

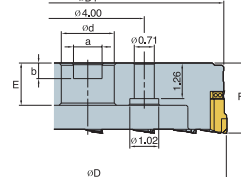
APDA000-B Cutter



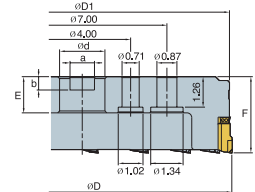
Ø 3 "



Ø 4 " ~ Ø 6 "



Ø 8 " ~ Ø 10 "



Ø 12 "

Designation	Stock		øD	øD ₁	ød	a	b	E	F	⊙	lb
	R	L									
APDA 300R/L-B6Z			3.0	2.843	1.0	0.375	0.248	0.866	2.0	6	0.3
400R/L-B6Z			4.0	3.803	1.25	0.5	0.319	0.866	2.0	6	0.4
500R/L-B8Z			5.0	4.804	1.5	0.625	0.394	1.181	2.5	8	0.8
600R/L-B10Z			6.0	5.803	2.0	0.75	0.433	1.181	2.5	10	1.3
800R/L-B12Z			8.0	7.803	2.5	1.0	0.551	1.496	2.5	12	1.8
1000R/L-B16Z			10.0	9.803	2.5	1.0	0.551	1.496	2.5	16	2.9
1200R/L-B18Z			12.0	11.803	2.5	1.0	0.551	1.496	3.125	18	5.1

● Stock item, ○ Under preparing for stock





Aero Mill

Insert type | Blade type | Cutting edge position

Insert type

◎ : 1st Choice ○ : 2nd Choice △ : 3rd Choice × : Bad choice

	Designation	Stock						Insert	
		H01						Finish	Rough
		R			L				
CDEW1204R/L-XCF		●			○			△	◎

	Designation	Stock						Facing insert	
		DP150		DP200		DP2200		Finish	Rough
		R	L	R	L	R	L		
CDEW1204R/L-XAF		○	○	●	●	○	○	◎	×
CDEW1204R/L-NAF*		○	○	●	○	○	○	◎	○

	Designation	Stock						Wiper insert	
		DP150		DP200		DP2200		Finish	Rough
		R	L	R	L	R	L		
CDEW1204R/L-XAW		○	○	●	●	○	○	◎	×
CDEW1204R/L-NAW*		○	○	●	●	○	○	◎	×

※ N/L applied insert on cutting edge

● : Stock ○ : Non-Stock

Blade type

◎ : 1st Choice ○ : 2nd Choice △ : 3rd Choice × : Bad choice

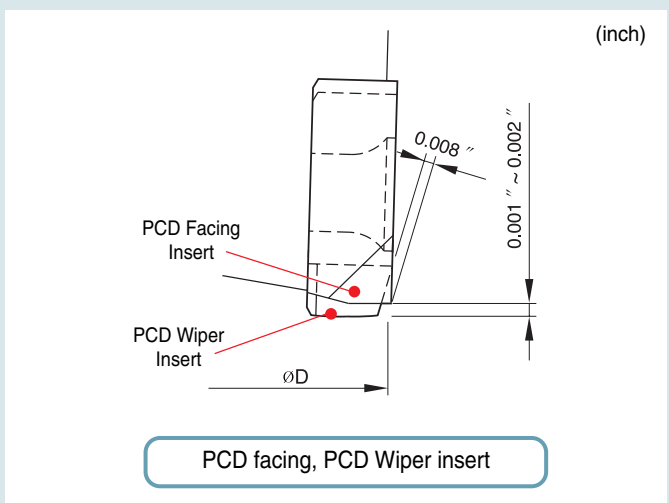
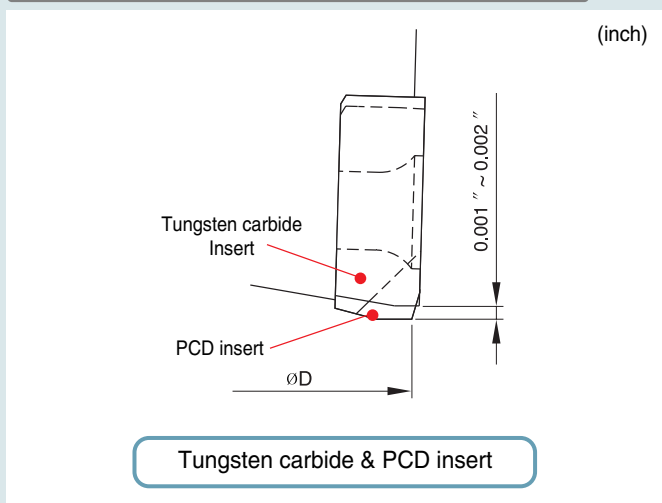
	Designation	Stock			Facing insert	
		DP150	DP200	DP2200	Finish	Rough
		BAPD(L)-XAF	○(○)	●(○)	○(○)	◎
BAPD(L)-NAF*	○(○)	○(○)	○(○)	◎	○	

	Designation	Stock			Wiper insert	
		DP150	DP200	DP2200	Finish	Rough
		BAPD(L)-XAW	○(○)	●(●)	○(○)	◎
BAPD(L)-NAW*	○(○)	○(○)	○(○)	◎	×	

※ N/L applied insert on cutting edge

● : Stock ○ : Non-Stock

Cutting edge position















Aero Mill

Parts | Coolant parts | Safety instruction

Parts

	Cartridge	Chip Cover	Chip Cover Screw	Insert Screw	Adjust Screw	Cartridge Screw	Wrench for Insert	Wrench for Cartridge
								
APDA-A	LAPDR/L-AJ	CAPDR/L-AJ	PTMA0411	FTNA0411	AZ0514	BHA0619-NYLOK	TW15S	HW50
APDA-B	-	CAPDR/L-AJ	PTMA0411	-	AZ0514	BHA0619-NYLOK	-	HW50

Coolant parts

Diameter	Type	Designation	Shape	Note
Ø3"	COOLANT BOLT	CBPA3-IN		Extra Charge
Ø4"		CBPA4-IN		
Ø5"		CBPA5-IN		
Ø6"		CBPA6-IN		
Ø8"	COOLANT COVER	CCP200		Extra Charge
Ø10"		CCP250		
Ø12"		CCP315		



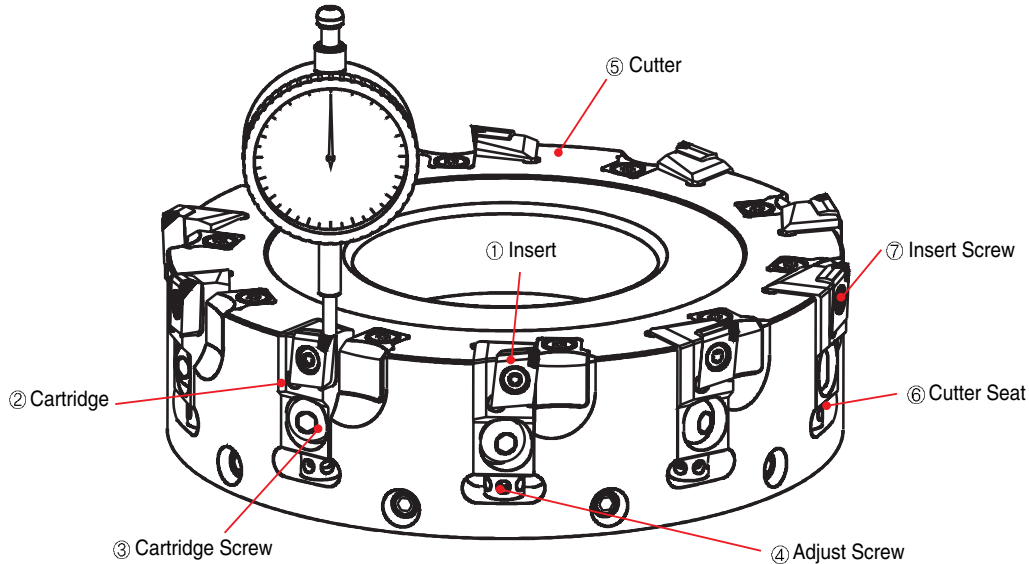
Warning

※ Safety instruction

- Use glasses safely and face cover with protective equipment. If cutting condition and use method are inaccurate, you may be injured by broken tools or scattered chips.
- Excessive cutting load may influence badly on both tool and machine.
Make suitable tool replacement for preventing failure of machining.
- After machine stopped, clean remained chips from machine with special cleaning equipment.
- Keep safety distance from acute and hot chip during machining.
- Make precaution for prevention of fire in advance when you use insoluble cutting oil.
- Assembled parts may be scattered at high speed cutting. Please use protective equipment.



Customer's manual



■ How to assemble the AEROMILL

1. Place ④Adjust screw in ⑥Cutter Seat.
2. Insert ②Cartridge to ④Adjust screw in ⑥Cutter Seat.
3. Insert ③Cartridge screw and joint right direction by 10Nm.
4. Place Insert on the Cartridge and joint them together by 5Nm.

■ How to adjust run-out of the AEROMILL

1. Clean the measuring instrument and set the position of the Aero mill cutter.
2. Release ③Cartridge screw first, then joint slightly by 2Nm.
3. Rotate the ④Adjust screw right direction and adjust it up to 5 μm (dial gage).
4. Joint ③Cartridge screw tightly by 10Nm.
5. Adjust it to the zero tolerance by rotating ④Adjust screw to the right direction.
 - * When you rotate ④Adjust screw to the right direction, inserts move to upper direction.

■ Notice

1. Please use OHP film to protect PCD insert and blade when you adjust tolerance.
It can cause chipping during adjusting run-out.
2. Please rotate the adjust screw to right direction only. When you exceed zero tolerance, should release cartridge screw first and rotate adjust screw to left direction, then rotate it to right and adjust again.