

ACHTECK•MILL

XD Series

High feed Milling

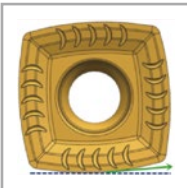


www.achtecktool.com

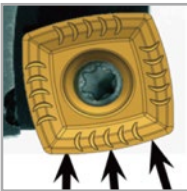
XDLT Product Overview

XDLT launched by Achteck is a new type high feed milling insert for aerospace field and automotive field. It's suitable for steels, stainless steels, High temperature alloys, gray cast iron and nodular cast iron milling with cutting applications of facing, ramping, plunging, helical ramping and slotting.

◆ Product Advantages



High feed milling gets high efficiency by over 5 times of normal milling feedrate.



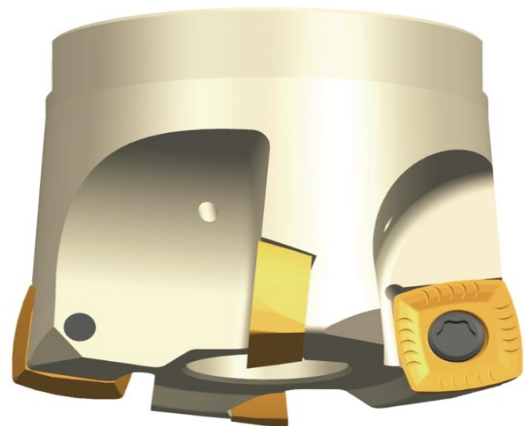
Axis force leading with great arc edge makes machining stably and lightly



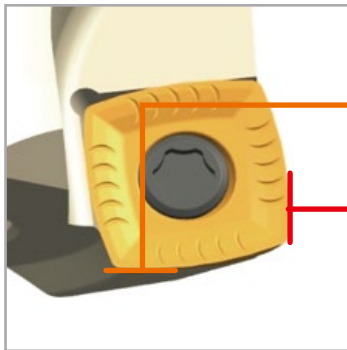
Strong "S" shape geometry design ensures perfect plunging performance.

◆ Cutter Structure Features

- Double rake angles make cutting gently and slightly.
- High Economy: 4 cutting edges.
- work piece material: P、K、M、S
- Shining Nickel-plated cutter has well corrosion resistance and wear resistance.
- Cutter dia. Range from $\phi 32$ to $\phi 125$ (including 125) with coolant.
- XDLT09/12 two size of inserts available.



◆ Insert Features



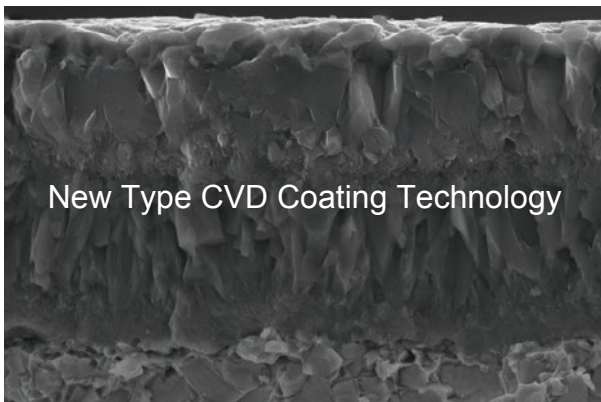
Two stage design cutting edge obtains perfect surface finishing under high speed face milling.

Meanwhile, the inner wall gets superior surface finishing on helical ramping.

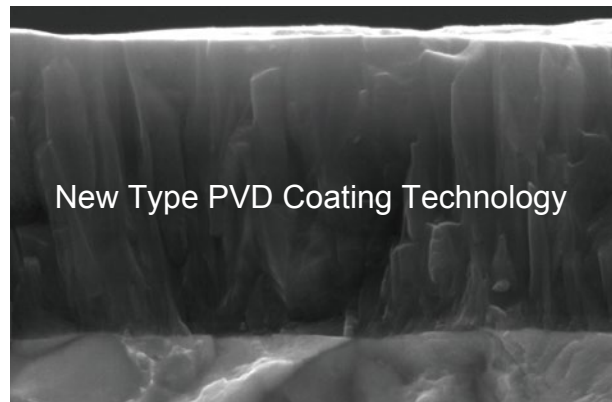


Fine grinding locating surface gets more reliable location.

◆ Coating Introduction



Multi-layer coating structure with perfect toughness;
Good wear resistance and high temperature oxidation resistance.
Smooth coating surface enhances work piece surface finish;
Well combination between coating layer and substrate extended tool life.



Alternate soft and hard nano-coating layer structure has high hardness and good toughness;
Good high temperature resistance and oxidation resistance.
Smooth coating surface enhances work piece surface finish;
Well combination between coating layer and substrate extended tool life.

◆ Insert Chip Breaker Introduction

HR2 → Stable type

For unfavourable machining conditions maximum cutting edge stability high feed rates.
Recommended for steel and cast iron;



MM3 → Universal type

For medium machining conditions universal application for most materials.
For good machining conditions with Low cutting forces and medium feed rates.



◆ Machining Case

Work piece: Aeroplane landing gear

Material: Ti5553

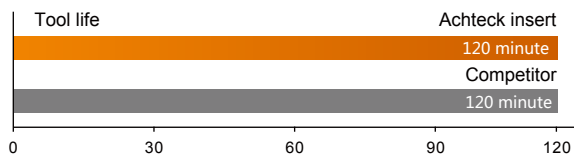
Hardness: HRC38

Coolant type: Emulsion

Cutter designation: AHM15-063-Z04-A22R-XD12-C

Insert designation: XDLT 120508ER-MM3 AP301U

Cutting Parameter: $V_c=35\text{m/min}$ $f_z=0.5\text{mm/z}$
 $a_p=1.0\text{mm}$



Comparison Result: Achteck tool life is same as competitor

Work piece: Plastic mold

Material: Carbon steel

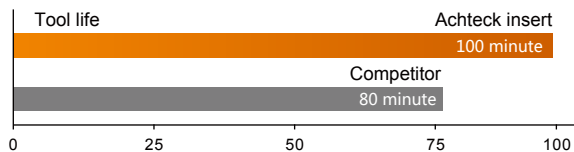
Hardness: HB240

Coolant type: Emulsion

Cutter designation: AHM15-052-Z04-A22R-XD12-C

Insert designation: XDLT 120508ER-MM3 AP351U

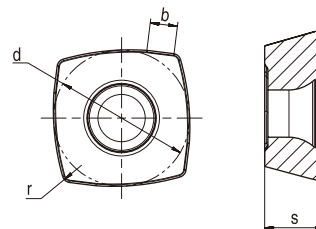
Cutting Parameter: $V_c=200\text{m/min}$ $f_z=1.2\text{mm/z}$
 $a_p=1.0\text{mm}$



Comparison Result: Achteck tool life is 25% higher than competitor

Insert stock

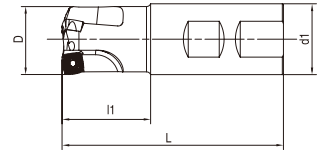
XD..09/12



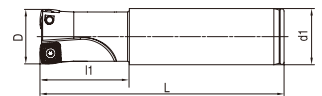
Insert	Designation	Dimensions (mm)				Grades						
						CVD coated		PVD coated			Uncoated	
		l	s	r	b	AC301P	AC301K	AP301U	AP351U	AP401U	AP351K	AW100K
	XDLT 090408ER-MM3	9.525	4.76	0.8	1.3			•				
	XDLT 120508ER-MM3	12.7	5.56	0.8	2.2	•	•	•	•		•	
	XDLT 120512ER-MM3	12.7	5.56	1.2	2.2	•	•	•	•		•	
	XDMW 090408ER-HR2	9.525	4.76	0.8	1.3		•					
	XDMW 120508ER-HR2	12.7	5.56	0.8	2.2		•	•				

Remark: • Represent for standard stock

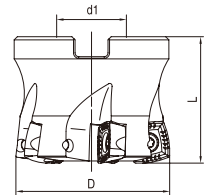
AHM15-XD09



Designation	D	d1	L	l1	apmax	Coolant	Z	Insert
AHM15-025-Z02-W25R-XD09-C	25	25	96	40	1.5		2	XD..0904
AHM15-032-Z03-W25R-XD09-C	32	32	100	40	1.5		3	



Designation	D	d1	L	l1	apmax	Coolant	Z	Insert
AHM15-025-Z02-C25R-XD09-C	25	25	200	50	1.5		2	XD..0904
AHM15-032-Z03-C32R-XD09-C	32	32	250	70	1.5		3	



Designation	D	d1	L	apmax	Coolant	Z	Insert
AHM15-040-Z03-A16R-XD09-C	40	16	32	1.5		3	XD..0904
AHM15-040-Z04-A16R-XD09-C	40	16	32	1.5		4	
AHM15-040-Z05-A16R-XD09-C	40	16	32	1.5		5	
AHM15-050-Z05-A22R-XD09-C	50	22	40	1.5		5	
AHM15-050-Z06-A22R-XD09-C	50	22	40	1.5		6	

Remark: represent for coolant
 represent for no coolant

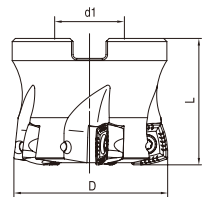
Dimensions	Spare parts		
Cutter diameter	Screw	Wrench	Torque
φ25-50			
	AST35084-60	ADT-T10	3.0Nm

Machining application				
Facing	Ramping	Plunging	Helical ramping	Slotting

AHM15-XD12



Designation	D	d1	L	l1	apmax	Coolant	Z	Insert
AHM15-032-Z02-C25R-XD12-C	32	32	250	70	2.5		2	XD..1205



Designation	D	d1	L	apmax	Coolant	Z	Insert
AHM15-052-Z03-A22R-XD12-C	52	22	40	2.5		3	XD..1205
AHM15-052-Z04-A22R-XD12-C	52	22	40	2.5		4	
AHM15-052-Z05-A22R-XD12-C	52	22	40	2.5		5	
AHM15-063-Z04-60A22R-XD12-C	63	22	40	2.5		4	
AHM15-063-Z05-60A22R-XD12-C	63	22	40	2.5		5	
AHM15-066-Z04-63A27R-XD12-C	66	27	45	2.5		4	
AHM15-066-Z05-63A27R-XD12-C	66	27	45	2.5		5	
AHM15-080-Z05-76A27R-XD12-C	80	27	50	2.5		5	
AHM15-080-Z08-76A27R-XD12-C	80	27	50	2.5		8	
AHM15-100-Z06-96A32R-XD12-C	100	32	50	2.5		6	
AHM15-100-Z09-96A32R-XD12-C	100	32	50	2.5		9	
AHM15-125-Z08-100A40R-XD12-C	125	40	63	2.5		8	
AHM15-125-Z11-100A40R-XD12-C	125	40	63	2.5		11	

Remark: represent for coolant
 represent for no coolant

Dimensions	Spare parts		
Cutter diameter	Screw	Wrench	Torque
φ32-125			
	AST4112-60	ADT-T15	3.0Nm

Machining application				
Facing	Ramping	Plunging	Helical ramping	Slotting

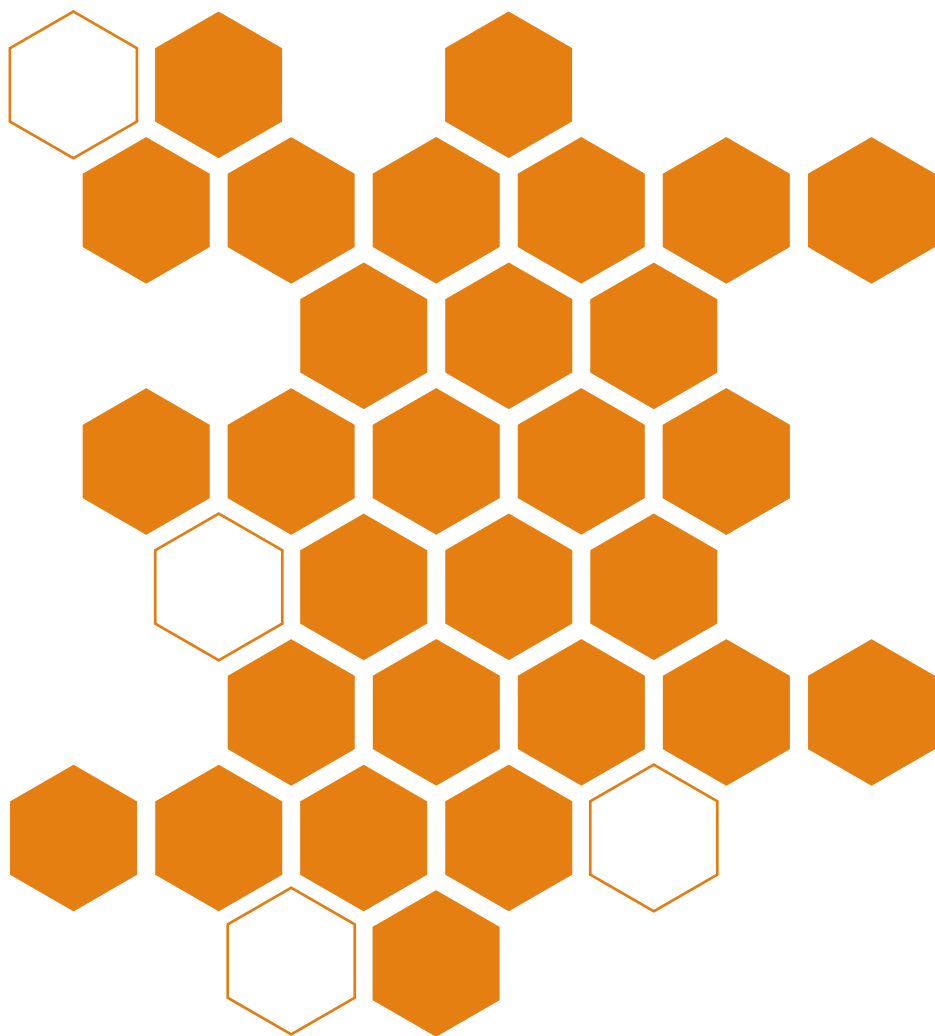
AHM15-XD09 Recommended Cutting Conditions

				Achteck Milling Grades Application Ranges																Cutting depth and feed rate																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, work piece clamping and coolants. Average chip thickness=hm(hm=fzXSin KappaR)

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The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, work piece clamping and coolants. Average chip thickness= $hm/(hm+fx)\sin KappaR$



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