

ACHTECK

**NEW
PRODUCT!**

ASM90-WN08

Shoulder Milling Cutter

With 6 cutting edges insert



Achteck Tools is launching a 90 degree shoulder milling cutter ,mounted with a triangular double sided, six cutting edges insert, providing a very good shoulder milling solution. Six cutting edges inserts provides an economical solution to reduce machining cost.

This new cutter with 90 degree kappa angle is ideal choice for shoulder milling. Three geometry MM3- MM4 and MR2 combined with Achteck's CVD and PVD coating technology provides exceptional performance. ASM90-WN08 can achieve excellent performance, tool life, surface quality and minimal mismatch. Suitable to machining steel, stainless steel, cast iron,super alloy and other materials.

The insert WN08..W has a long wiper geometry provides a good surface finish and high productivity.

● Product Features

- Six cutting edges negative inserts, good economy, strong large rake angle geometry, thickness 7.9.
- Three kinds of geometry, MM3、MM4、MR2, all with short wiper cutting edge, will obtain better surface roughness;
- Mounted with long wiper insert, it can obtain good surface roughness and machining efficiency.
- Corner radius of insert are R0.4/0.8/1.2/1.6;
- Positive rake angle insert, reduce cutting force.
- 6 different grades which cover a wide application area. AP301U, AP351U, AP351K, AP401U, AC301P, AC301K;
- Precise 90 degree shoulder milling cutter, cutter body diameter range: $\varnothing 40$ - $\varnothing 160$ mm;
- Three kinds of pitch design, coarse design are mainly used for slot milling and shoulder milling, close tooth design are mainly used for shoulder milling, extra close tooth design is mainly used for short chip materials and finishing machining.
- Light cutting behavior, benefits from the positive rake angle design;
- High-precision axial and radial run-out;
- The cutter design has a variety of interface forms: screw modular type, cylindrical type, weldon type and shell mill (Arbor).
- Shining Nickel-plated cutter has good corrosion resistance and wear resistance.

• Chip breaker Features

Chip breaker name	Edge Preparation	Feature
MR2 Stable type		- Suitable for unstable cutting conditions - Best cutting edge stability; - High feedrate.
MM4 General type		- First choice - Medium cutting conditions - General machining
MM3 Sharp type		- Fine cutting conditions and finish operation; - Low cutting force (used for small power machine)

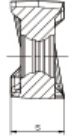
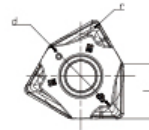
• Grade application

Grade	Coating	Material					
		P	M	K	S	N	H
AP301U	PVD	●	◐		○		
AP351U	PVD	●	◐		○		
AP401U	PVD		●		◐		
AC301P	CVD	●	◐	○			
AC301K	CVD			●			◐
AP351K	PVD			●			

● Marked : 1st Choice ◐ Marked : 2nd Choice ○ Marked : Supplementary application

● Insert stock item

WNGU 08



Insert	Designation	Dimensions				Grades					
						CVD coating		PVD coating			
		l	d	s	r	AC301P	AC301K	AP301U	AP351U	AP401U	AP351K
	WNGU 080604R-MM3	8	12.5	7.88	0.4				●	●	
	WNGU 080608R-MM3	8	12.5	7.88	0.8			●	●	●	
	WNGU 080604R-MM4	8	12.5	7.88	0.4			●	●	●	●
	WNGU 080608R-MM4	8	12.5	7.88	0.8	●	●	●	●	●	●
	WNGU 080612R-MM4	8	12.5	7.88	1.2			●	●	●	
	WNGU 080616R-MM4	8	12.5	7.88	1.6			●	●	●	
	WNGU 080608R-MR2	8	12.5	7.88	0.8		●	●			●
	WNGU 080612R-MR2	8	12.5	7.88	1.2			●			●
	WNGU 080616R-MR2	8	12.5	7.88	1.6			●			●



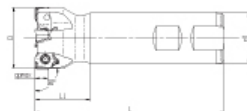
WNHX 08

Insert	Designation	Dimensions				Grades					
						CVD coating		PVD coating			
		d	b	s	r	AC301P	AC301K	AP301U	AP351U	AP401U	AP351K
	WNHX 0806ZZR-W	11.3	4.8	6.47	1.0		●	●			

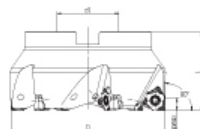
Remark: ● Represent for standard stock

● **Cutter stock item**

ASM90-WN08-C



Designation	Dimension					Coolant	Z	Insert
	D	d1	L	l1	apmax			
ASM90-040-Z03-W32R-WN08-C	40	32	120	35	8.0		3	WNGU 0806
ASM90-040-Z04-W32R-WN08-C	40	32	120	35	8.0		4	



Designation	Dimension				Coolant	Z	Insert
	D	d1	L	apmax			
ASM90-050-Z04-A22R-WN08-C	50	22	40	8.0		4	WNGU 0806
ASM90-050-Z05-A22R-WN08-C	50	22	40	8.0		5	
ASM90-063-Z04-A22R-WN08-C	63	22	40	8.0		4	
ASM90-063-Z06-A22R-WN08-C	63	22	40	8.0		6	
ASM90-063-Z07-A22R-WN08-C	63	22	40	8.0		7	
ASM90-080-Z05-A27R-WN08-C	80	27	50	8.0		5	
ASM90-080-Z07-A27R-WN08-C	80	27	50	8.0		7	
ASM90-080-Z09-A27R-WN08-C	80	27	50	8.0		9	
ASM90-100-Z06-A32R-WN08-C	100	32	50	8.0		8	
ASM90-100-Z08-A32R-WN08-C	100	32	50	8.0		8	
ASM90-100-Z11-A32R-WN08-C	100	32	50	8.0		11	
ASM90-125-Z07-A40R-WN08-C	125	40	63	8.0		7	
ASM90-125-Z11-A40R-WN08-C	125	40	63	8.0		11	
ASM90-125-Z13-A40R-WN08-C	125	40	63	8.0		13	
ASM90-160-Z08-A40R-WN08	160	40	63	8.0		8	
ASM90-160-Z12-A40R-WN08	160	40	63	8.0		12	

Dimensions		Cutter spare parts		
Cutter diameter	Screw	Wrench		Torque
φ40-φ80	AST4085-60	AWT-T15		3.5Nm
				
φ100-φ160	AST4085-60	ADT-T15		
		ADT-G16	BIT-T15	
				

Application			
Facing	Shouldering	Slotting	Plunging

Remark: represent for coolant
 represent for no coolant

● Recommended cutting speed by materials

Machined Materials				Acheltek Milling Grades Application Ranges										Cutting speed and feed rate											
ISO	Material classification	Tensile strength (N/mm ²)	Hardness (HB)	AC301K	AP351K	AP301U	PVD	PVD	AC301P	AP351U	AP401U	WN08													
				CVD	PVD	PVD	CVD	PVD	PVD	槽型															
				P10-35	-	P15-35	P25-40	P30-45	P20-40																
				-	-	M15-35	M25-40	M30-45	M20-40																
				K10-35	K15-40	-	-	-	-																
				-	-	-	-	-	-																
				-	-	-	-	-	-																
				-	-	-	-	-	-																
				Min	Med	Max	Min	Med	Max	Min	Med	Max	Min	Max	Min	Max	Min	Max	Min	Max					
				Cutting speed (m/min)										ap(mm)		Feed rate(mm/z)									
P	Non-alloyed steel	<600	<180				48	340	290	43	230	120	200	205	170		0.12	0.22	0.10	0.28	0.15	0.30			
		<950	<280		320	340	200	380	220	120	200	180	160		0.12	0.22	0.10	0.28	0.15	0.30					
		700-950	200-280		290	210	185	340	240	130	200	155	110		0.12	0.22	0.10	0.28	0.15	0.30					
		950-1200	280-355		280	210	200	280	150	80	180	130	90		0.12	0.18	0.10	0.20	0.15	0.28					
M	Alloyed steel	1200-1400	355-415		210	170	110	145	105	65	140	105	70		0.12	0.18	0.10	0.20	0.15	0.22					
		Duplex stainless steel	778	230		165	150	130	225	180	125	270	215	155	110	85	0.12	0.18	0.10	0.20	0.15	0.24			
		Austenitic stainless steel	675	200		270	185	90	210	145	75	260	180	90	185	140	105	0.12	0.16	0.10	0.18	0.15	0.20		
		Precipitation-hardening stainless steel	1013	300		300	225	165	140	130	90	170	150	110	125	95	70	0.12	0.12	0.10	0.13				
K	Grey cast iron	700	220		408	310	140	360	230	130	330	280	130	310	90	230	220	150		0.12	0.20	0.10	0.28	0.15	0.30
		850	260		430	265	140	350	250	130	330	260	130	250	150	100	160	130	70	0.12	0.20	0.10	0.28	0.15	0.30
		950-1200	280-355		338	230	100	270	200	100	410	320	210	310	240	150	380	300	190	0.12	0.18	0.10	0.20	0.15	0.28
		Maleable cast iron	600	250																					
S	Fe based alloy	943	280				50	40	30											0.12	0.13	0.10	0.15		
		Co based alloy	1076	320				45	38	30										0.12	0.12	0.10	0.13		
		Ni based alloy	1177	350				45	38	30										0.12	0.12	0.10	0.13		
		Ti-alloy	1262	370				100	75	30										0.12	0.13	0.10	0.15		
N	Aluminum	260	75																						
		Aluminum alloy	447	130																					
H	Hardened steel	-	50-60HRC																						
		Chilled cast iron	-	55HRC																					

* 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 cooants.

* When slotting , ap≤1/2apmax