POWER MILL

- Smallest milling cutter 10mm.
- Patented Dual Relief Angle Insert!
- Higher feed rate!
- Higher wearing resistance!!

Nine9®

THE ACCURATE &
ADVANTAGED SOLUTION

www.jic-tools.com.tw

No Need To Choose Nine9 Does It All !>>

Cost Saving | Time Saving | Highly Efficient | Long Tool Life

Nine 9 Power Mill offers you High Rigidity & High Feed Rate milling cutter.

Precision ground insert performs efficient repeatability and excellent accuracy.
Special geometry design helps the strength of cutting edge in shoulder milling application.
Patented Dual relief angle (7° and 15°) increases the stiffness of the insert for absorbing cutting force.

On insert size to optimize the number of teeth for feed operation.

Nine 9 Power Mill has minimal size insert type, it helps you to manage your tool stock in low cost to compare other milling cutter with various size inserts.

Smallest indexable milling cutter from 10mm.
Low tool cost to compare with solid carbide end mill.

Reliable quality ! Valuable product !

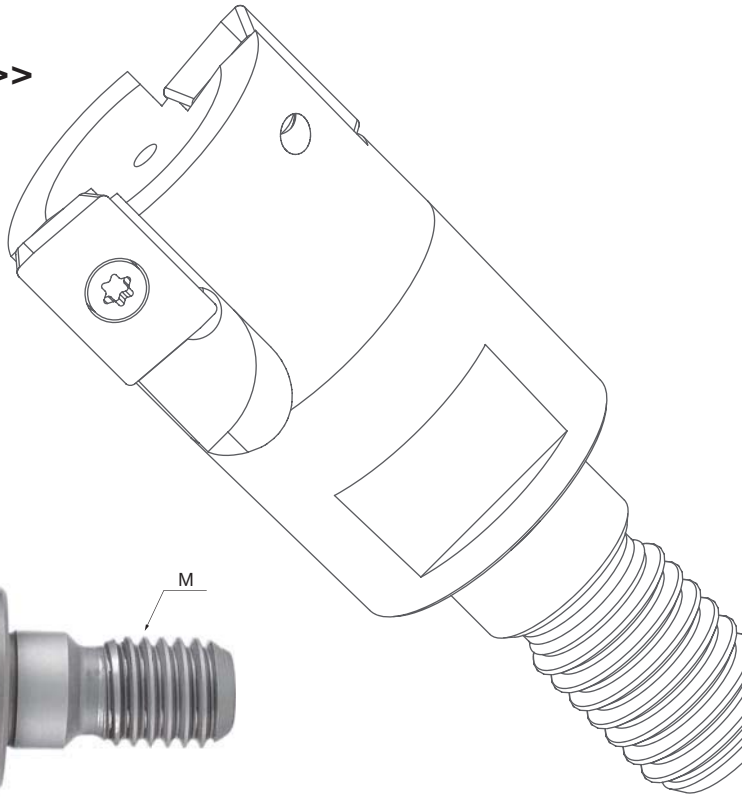
Contents>>

A Series Milling Insert

Features : >>

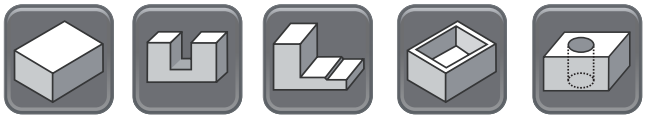
- Submicron carbide inserts are fully ground for high precision output.
- Strong insert with high positive geometry and helical cutting edges.
- Shoulder mill with good cutting performance and cutting edge strength.

Modular Milling Head (Screw-Fit Type) : >>



Order No.	Part No.	D	L	M	Z	Screw	Key
99802-M08-16A10	M08-16A10	16	25	08	2	 NS-25060	 NK-T7
99802-M10-20A10	M10-20A10	20	30	10	3		
99802-M12-25A10-3T	M12-25A10-3T	25	35	12	3		

A Series Milling Insert



Patented Precision Ground Insert A : >>

Order No.	Part No.	ØD ±0.05	L	L1	L2	Ød h6	No. of teeth	Insert	Screw/Key
00-99802-BC10-10A06	BC10-10A06-100	10	100	40	60	10	2	A9FT060205H A9GT060205H A9GT060210H	 NS-18037 0.9Nm  NK-T6
00-99802-BC12-10A06	BC-12-10A06-80	10	80	20	60	12	2		
00-99802-BC12-11A06	BC12-11A06-80	11	80	22	58	12	2		
00-99802-BC12-12A06	BC12-12A06-80	12	80	24	56	12	2		
00-99802-BC16-13A06	BC16-13A06-100	13	100	26	74	16	2		
00-99802-BC16-14A06	BC16-14A06-100	14	100	28	72	16	2		
00-99802-BC16-15A06	BC16-15A06-100	15	100	30	70	16	3		
00-99802-BC16-16A06	BC16-16A06-100	16	100	32	68	16	3		
00-99802-BC16-16A10	BC16-16A10-100	16	100	32	68	16	2	A9MT1035 A9FT10350H	 NS-25060 1.0Nm  NK-T7
00-99802-BC20-20A10	BC20-20A10-120	20	120	40	80	20	3		
00-99802-BC25-25A10	BC25-25A10-150	25	150	50	100	25	3		

A Series Milling Insert

A9MT :

High rigidity, special edge honing, resistance of impact during milling operation, good for milling of carbon steel and alloy steel.

NC2032-

- K20F grade, AlTiN coated.
- Special chip breaker design.
- Good for hard cutting carbon steel and alloy steel.

A9GT :

Sharp cutting edge and high positive rake angle, good for finishing milling and surface roughness.

NC2033-

- K20F grade, TiAlN coated.
- For better surface roughness.
- Good for all kind of steel.

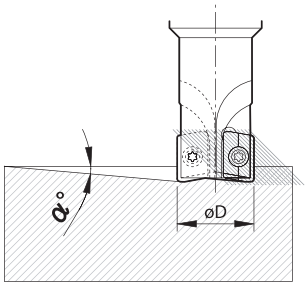
A9FT :

Sharp cutting edge and high positive rake angle, low friction coefficient for Non-Ferrous metal.

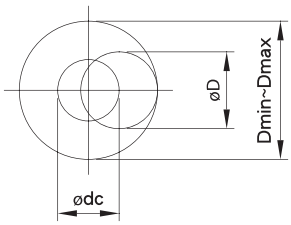
NC9031-

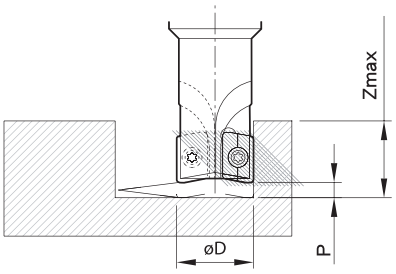
- K20F grade, TiN coated.
- Good for Al, Al-alloy, Copper, Copper alloy and Non-Ferrous metal, etc.

Ramping :



Helical milling :

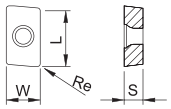


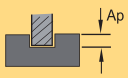
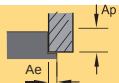


ØD	α°	Dmin. (hole diameter)	P (Plunge depth)	Zmax.	Dmax. (hole diameter)	P (Plunge depth)	Zmax.
10	5°	13	0.41	5	18	1.09	10
11	4.5°	15	0.50	5.5	20	1.11	11
12	4°	17	0.55	6	22	1.09	12
13	3.5°	19	0.58	6.5	24	1.05	13
14	3°	21	0.58	7	26	0.98	14
15	2.5°	23	0.55	7.5	28	0.89	15
16	2°	25	0.50	8	30	0.76	16

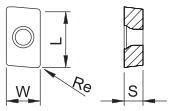
A Series Milling Insert

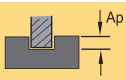
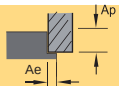
A Series Insert Cutting Data (Ø10~Ø16mm) : >>

Part No.	Grade	Coating		Dimensions			
				L	W	S	Re±0.03
A9GT060205H-NC2033	K20F	TiAlN		6.5	4	2.45	0.5
A9GT060210H-NC2033	K20F	TiAlN		6.5	4	2.45	1.0
A9FT060205H-NC9031	K20F	TiN		6.5	4	2.45	0.5

Part No.	Grade of Insert	Insert size	Vc(m/min)	fz(mm/tooth)	 Ap(mm)	 Ap(mm)	Ae(mm)
Carbon Steel	 NC2033	06	80~150	0.03~0.07	1.5	4	1.5
Low-alloy Steel, C ≤ 0.3%	 NC2033	06	80~150	0.03~0.07	1.5	4	1
High-alloy Steel, C > 0.3%	 NC2033	06	60~120	0.03~0.07	1.0	2.5	1
Casting Steel	 NC2033	06	60~120	0.03~0.07	1.0	2.5	1
Stainless Steel	 NC2033	06	60~120	0.01~0.05	0.5	2	1
Malleable Cast Iron Grey Cast Iron	 NC2033	06	100~150	0.03~0.07	1.5	4	1.5
Al, Al-alloy	 NC9031	06	200~500	0.03~0.07	2	4	2

A Series Insert Cutting Data (Ø16~Ø25mm) : >>

Part No.	Grade	Coating		Dimensions			
				L	W	S	Re±0.03
A9FT10350H-NC9031	K20F	TiN		10	6.6	3.5	0.5
A9MT1035-NC2032	K20F	TiAlN		10	6.6	3.5	0.4

Part No.	Grade of Insert	Insert size	Vc(m/min)	fz(mm/tooth)	 Ap(mm)	 Ap(mm)	Ae(mm)
Carbon Steel	 NC2032	10	150~250	0.08~0.15	3	8	3
Low-alloy Steel, C ≤ 0.3%	 NC2032	10	150~250	0.08~0.15	3	8	2
High-alloy Steel, C > 0.3%	 NC2032	10	120~200	0.08~0.15	2	4	2
Casting Steel	 NC2032	10	120~200	0.08~0.12	2	5	2
Stainless Steel	 NC2032	10	80~120	0.04~0.08	1	4	2
Malleable Cast Iron Grey Cast Iron	 NC2032	10	100~150	0.06~0.10	3	8	3
Al, Al-alloy	 NC9031	10	200~1000	0.06~0.12	5	8	3

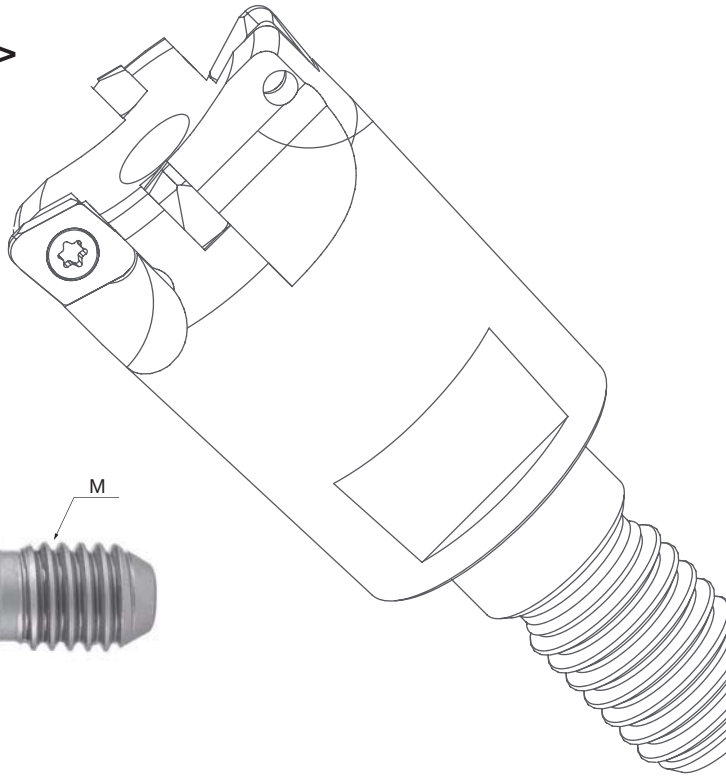
● Reduce the feed rate 30% from the above table for slotting operation.

C Series-Torus Radius Insert

Features : >>

- Submicron carbide inserts are fully ground, Patented design.
- Special design milling cutter and ground insert for semi-finishing 3D surface milling for mould industry.
- Series C is developed for replacement of the other milling cutters with ram feed.

Modular Milling Head (Screw-Fit Type) : >>



Order No.	Part No.	D	M	L	Z	Screw	Key
99802-M06-12C5	M06-12C5	12	06	25	2	NS-20045	NK-T6
99802-M06-13C5	M06-13C5	13	06	25	2		
99802-M08-16C5	M08-16C5	16	08	25	3		
99802-M08-17C5	M08-17C5	17	08	25	3		
99802-M10-20C5	M10-20C5	20	10	30	3		
99802-M10-21C5	M10-21C5	21	10	30	3		
99802-M12-25C5	M12-25C5	25	12	35	4		
99802-M12-26C5	M12-26C5	26	12	35	4		

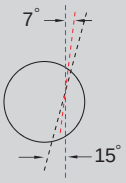
C Series-Torus Radius Insert

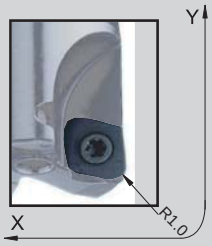
Patented Precision Ground Insert C : >>

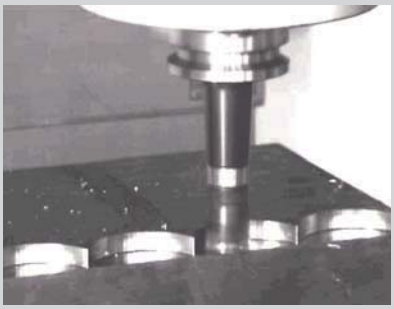
- Submicron carbide inserts are fully ground.
- Good for semi-finishing 3D surface milling for mold industry.
- To replace the other milling cutters with ramp feed.

- Patented Dual Relief Angle Insert !
- Higher feed rate!
- Higher wearing resistance !

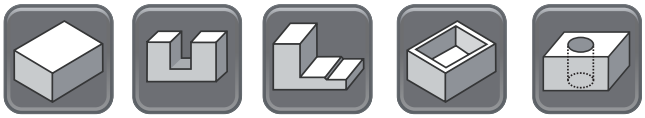
Dual Relief :







Cylindrical Shank Milling Cutter : >>



Order No.	Part No.	ØD ±0.03	L	L1	Ød h6	Ød1	No. of teeth	Insert	Screw / Key
00-99802-BC12-12C5	BC12-12C5	12	100	30	12	10.5	2	 C9MT05T105 C9MT05T110 C9MT05T110H	 NS-20045 0.8Nm  NK-T6
00-99802-BC16-16C5	BC16-16C5	16	120	40	16	14.5	3		
00-99802-BC20-20C5	BC20-20C5	20	130	50	20	18	3		
00-99802-BC25-25C5	BC25-25C5	25	150	60	25	23	4		

C Series-Torus Radius Insert

C9MT :

Patented insert, fully ground corner radius.

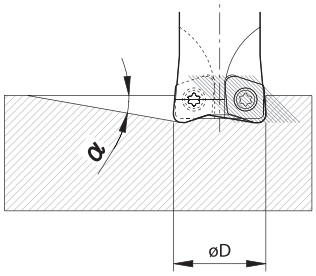
NC30-

- Submicron carbide insert, AlTiN coated, K10 grade.
- Flat cutting edge design, universal type for all kind of materials.

NC2032-

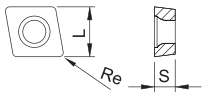
- Submicron carbide insert, AlTiN coated, K20F grade.
- High positive angle, special chip breaker design, higher wearing resistance.
- Good for carbon steel and low alloy steel.

Milling Operation Notice : >>



øD	α °
12	8
16	5.5
20	4
25	3

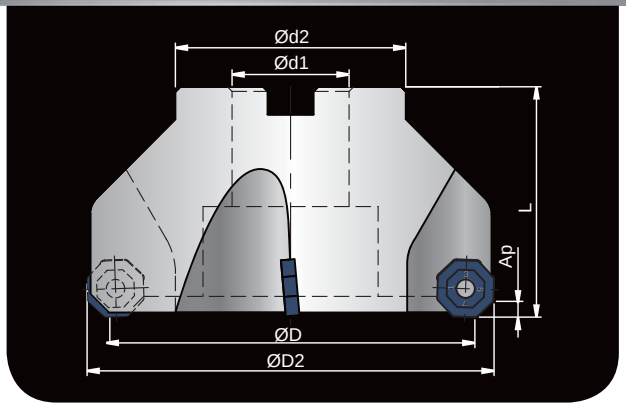
C series Insert Cutting Data : >>

Part No.	Grade	Coating		Dimensions		
				L	S	R±0.02
C9MT05T105-NC30	K10F	AlTiN		5	2.0	0.5
C9MT05T110-NC30	K10F	AlTiN		5	2.0	1.0
C9MT05T110H-NC2032	K20F	AlTiN		5	2.0	1.0

Order No.	Grade of Insert	Vc(m/min)	fz(mm/tooth)	Cutting Depth Ap(mm)
Carbon Steel	 NC2032	150~300	0.2~0.5	0.2~0.5
	 NC30	150~300	0.2~0.5	0.2~0.5
Low-alloy Steel, C ≤ 0.3%	 NC2032	150~300	0.2~0.5	0.2~0.5
	 NC30	150~300	0.2~0.5	0.2~0.5
High-alloy Steel, C > 0.3%	 NC30	120~200	0.2~0.4	0.2~0.4
Casting Steel	 NC30	120~200	0.2~0.4	0.2~0.4
Hardened Steel < HRC52	 NC30	100~150	0.1~0.3	0.1~0.3

- Reduce the feed rate 30% from the above table for slotting operation.

Indexable 16 cutting edge insert milling cutter



Features : >>

- Target M/C user.
- High feed Rate 0.5mm / tooth.
- Economical per edge cost.
- Easy to indentify the sequence.
- High power for metal removal.

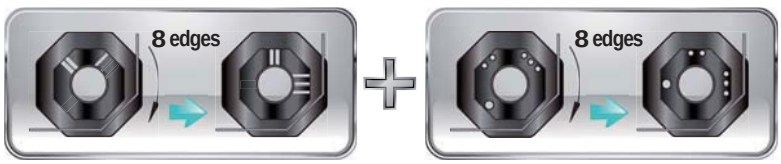
For CW (Clockwise)

Part No.	ØD	ØD2	Ød1	Ød1	Ap	L	Z	Insert	Screw/Key
00-99542-050	50	58	22	50	3	45	3	N9GJ11T3F2-O	NS-35080 2.5Nm / NK-T15
00-99542-063	63	71	22	50	3	45	4		
00-99542-080	80	88	25.4	50	3	50	5		
00-99542-100	100	108	31.75	70	3	50	6		
00-99542-125	125	133	38.1	85	3	63	6		

For CCW (Clockwise)

Part No.	ØD	ØD2	Ød1	Ød1	Ap	L	Z	Insert	Screw/Key
00-99542-050L	50	58	22	50	3	45	3	N9GJ11T3F2-O	NS-35080 2.5Nm / NK-T15
00-99542-063L	63	71	22	50	3	45	4		
00-99542-080L	80	88	25.4	50	3	50	5		
00-99542-100L	100	108	31.75	70	3	50	6		
00-99542-125L	125	133	38.1	85	3	63	6		

Change Insert By CW Direction



Cutting Data

Work Material	Vc (m / min.)	fz (mm / tooth)	Grade of Insert
Carbon steel P3, P5	200 (120~250)	0.1~0.5	NC2032
alloy steel SKD, SKT	120 (120~200)	0.1~0.3	NC2032
Stainless Steel SUS	100 (80~120)	0.1~0.3	NC2032
Cast iron	120 (100~200)	0.1~0.5	NC2032

JIMMORE International Corp.

Distributor