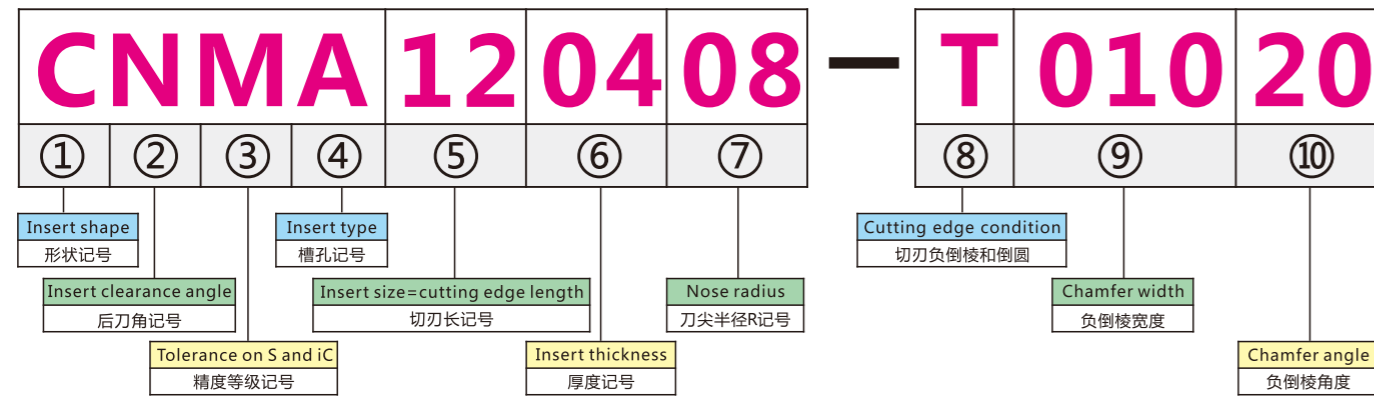


ISO numerical Code for Inserts 机夹式刀片的称呼方法



① Insert shape 形状记号

Mark 记号	Insert shape, nose angle 刀片形状和顶角
C	80° Diamond 菱形
D	55° Diamond 菱形
E	75° Diamond 菱形
F	50° Diamond 菱形
V	35° Diamond 菱形
M	86° Diamond 菱形
R	Round 圆形
S	Square 正方形
T	Triangle 正三角形
W	80° Hexagon 等边不等角六角形
A	85° Parallelogram 平行四边形
B	82° Parallelogram 平行四边形
K	55° Parallelogram 平行四边形
L	Rectangle 长方形
H	Hexagon 正六边形
O	Octagon 正八角形
P	Pentagon 正五角形

② Insert clearance angle 后刀角记号

Mark 记号	Clearance angle 后刀角
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°

● Number of cutting edges 刀尖数量

1 cutting edge	
2 cutting edges	
3 cutting edges	
4 cutting edges	

③ Tolerance on S and iC 精度等级记号

Mark 记号	Tolerance 允许差 (mm)		
	Nose height 刀尖高度 m	Thickness 厚度 s	Inscribed circle 内切圆直径 iC
A	±0.005	±0.025	±0.025
F	±0.005	±0.025	±0.013
C	±0.013	±0.025	±0.025
H	±0.013	±0.025	±0.013
E	±0.025	±0.025	±0.025
G	±0.025	±0.13	±0.025
J	±0.005	±0.025	±0.05~±0.13
K	±0.013	±0.025	±0.05~±0.13
L	±0.025	±0.025	±0.05~±0.13
M	±0.08~±0.18	±0.13	±0.05~±0.13
N	±0.08~±0.18	±0.025	±0.05~±0.13
U	±0.13~±0.38	±0.13	±0.08~±0.25

Reference: Insert shape, size classification based on Tolerance M

参考: 以M级精度的形状,尺寸分类明细

● Nose height Tolerance 刀尖高度允许差 (mm)

Inscribed circle 内切圆直径 iC	Triangle 正三角形	Square 正方形	80° Diamond 菱形	55° Diamond 菱形	35° Diamond 菱形	Round 圆形
6.35	±0.08	±0.08	±0.08	±0.11	±0.16	——
9.525	±0.08	±0.08	±0.08	±0.11	±0.16	——
12.7	±0.13	±0.13	±0.13	±0.15	——	——
15.875	±0.15	±0.15	±0.15	±0.18	——	——
19.05	±0.15	±0.15	±0.15	±0.18	——	——
25.4	±0.18	±0.18	±0.18	——	——	——
31.75	——	±0.20	——	——	——	——

● Inscribed circle Tolerance 内切圆允许差 (mm)

Inscribed circle 内切圆直径 iC	Triangle 正三角形	Square 正方形	80° Diamond 菱形	55° Diamond 菱形	35° Diamond 菱形	Round 圆形
6.35	±0.05	±0.05	±0.05	±0.05	±0.05	——
9.525	±0.05	±0.05	±0.05	±0.05	±0.05	±0.05
12.7	±0.08	±0.08	±0.08	±0.08	——	±0.08
15.875	±0.10	±0.10	±0.10	±0.10	——	±0.10
19.05	±0.10	±0.10	±0.10	±0.10	——	±0.10
25.4	±0.13	±0.13	±0.13	——	——	±0.13
31.75	——	±0.15	——	——	——	±0.15

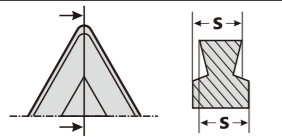
④ Insert type 槽孔记号

Mark 记号	Profile 形状 (断面)	Bore 孔的有无	Bore shape 孔的形状	Chip breaker 断屑槽
N		Without 无孔	Without 无	Without 无
R		Without 无孔	Without 无	Single 单面
F		Without 无孔	Without 无	Double 双面
A		With 有孔	Cylinder 圆柱状	Without 无
M		With 有孔	Cylinder 圆柱状	Single 单面
G		With 有孔	Cylinder 圆柱状	Double 双面
W		With 有孔	Cylinder+Single chamfer40~60° 圆柱状+单面倒角40~60°	Without 无
T		With 有孔	Cylinder+Single chamfer40~60° 圆柱状+单面倒角40~60°	Single 单面
B		With 有孔	Cylinder+Single chamfer70~90° 圆柱状+单面倒角70~90°	Without 无
H		With 有孔	Cylinder+Single chamfer70~90° 圆柱状+单面倒角70~90°	Single 单面
Q		With 有孔	Cylinder+Double chamfer40~60° 圆柱状+双面倒角40~60°	Without 无
U		With 有孔	Cylinder+Double chamfer40~60° 圆柱状+双面倒角40~60°	Double 双面
C		With 有孔	Cylinder+Double chamfer70~90° 圆柱状+双面倒角70~90°	Without 无
J		With 有孔	Cylinder+Double chamfer70~90° 圆柱状+双面倒角70~90°	Double 双面
X	Special design 特殊形状	——	——	——

⑤ Insert size=cutting edge length 切刃长记号

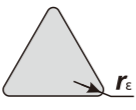
Shape 形状	Mark 记号	Cutting edge length 切刃长	Inscribed circle 内切圆直径 iC	Shape 形状	Mark 记号	Cutting edge length 切刃长	Inscribed circle 内切圆直径 iC
80° Diamond 菱形 	06	6.4	6.35	Square 正方形 	06	6.35	6.35
	08	8.0	7.94		07	7.94	7.94
	09	9.7	9.525		09	9.525	9.525
	12	12.9	12.7		12	12.7	12.7
	16	16.1	15.875		15	15.875	15.875
	19	19.3	19.05		19	19.05	19.05
55° Diamond 菱形 	07	7.7	6.35	Triangle 正三角形 	25	25.4	25.4
	11	11.6	9.525		31	31.75	31.75
	15	15.5	12.7		06	6.9	3.97
	19	19.4	15.875		08	8.2	4.76
80° Hexagon 等边不等角六角形 	03	3.8	5.56	Round 圆形 	09	9.6	5.56
	04	4.3	6.35		11	11	6.35
	05	5.4	7.94		16	16.5	9.525
	06	6.5	9.525		22	22	12.7
	08	8.7	12.7		27	27.5	15.875
	10	10.9	15.875		33	33	19.05
35° Diamond 菱形 	16	16.6	9.525	08	8	8	
				10	10	10	
				12	12	12	
				12	12.7	12.7	
				15	15.875	15.875	
				16	16	16	
			19	19.05	19.05		
			25	25	25		
			25	25.4	25.4		

⑥ Insert thickness 厚度记号



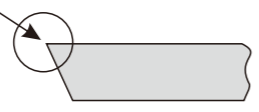
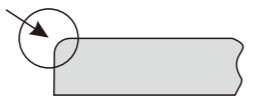
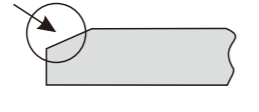
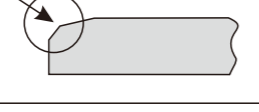
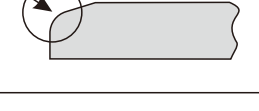
Mark 记号	Thickness 厚度(mm)
01	S=1.59
T1	S=1.98
02	S=2.38
T2	S=2.78
03	S=3.18
T3	S=3.97
04	S=4.76
T4	S=4.96
05	S=5.56
T5	S=5.95
06	S=6.35
T6	S=6.75
07	S=7.94
09	S=9.52
T9	S=9.72
11	S=11.11
12	S=12.70

⑦ Nose radius 刀尖半径R记号

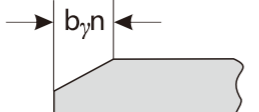


Mark 记号	02	04	08	12	16	24
Nose radius r_e 刀尖半径 r_e (mm)	0.2	0.4	0.8	1.2	1.6	2.4

⑧ Cutting edge condition 切刃负倒棱和倒圆

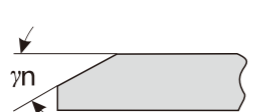
F		Sharp cutting edge 尖刃
E		ER treated cutting edge (honing) 倒圆 (珩磨/钝化)
T		Negative land (chamfer) 负倒棱
K		Double Negative land 双负倒棱
S		Negative land + ER treated 负倒棱+倒圆

⑨ Chamfer Width 负倒棱宽度 (mm)



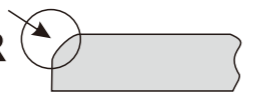
	010	020	030	040	050
	0.1	0.2	0.3	0.4	0.5

⑩ Chamfer Angle 负倒棱角度

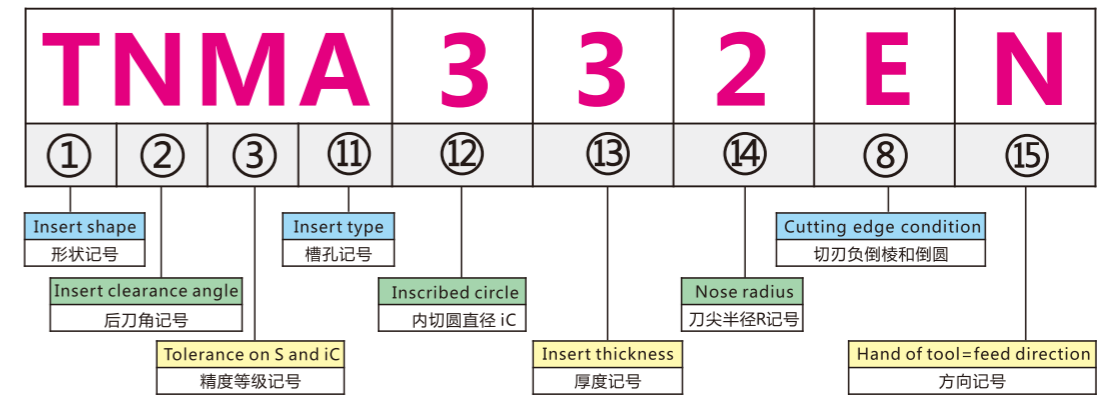


	10	15	20	25	30	35	45
	10°	15°	20°	25°	30°	35°	45°













● ER treated 倒圆

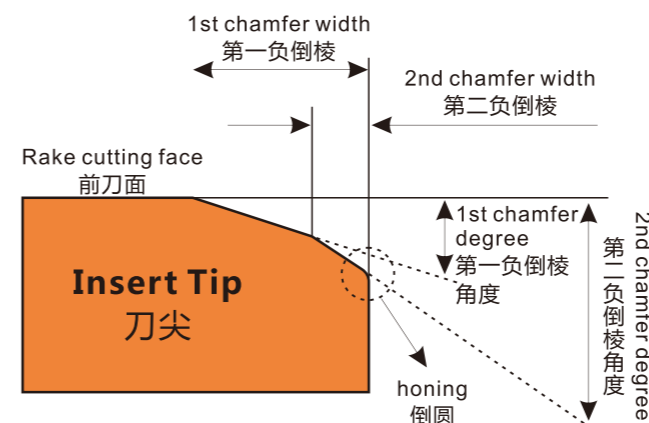


	02	05	10	20	30
	0.002	0.005	0.01	0.02	0.03



⑪ Insert type 槽孔记号

Mark 记号	Inscribed circle 内切圆直径 iC	Profile 形状 (断面)	Bore 孔的有无	Chip breaker 断屑槽
N	>6.35		Without 无孔	Without 无
E	<6.35		Without 无孔	Without 无
F	>6.35		Without 无孔	Double 双面
L	<6.35		Without 无孔	Double 双面
R	>6.35		Without 无孔	Single 单面
S	<6.35		Without 无孔	Single 单面
A	>6.35		With 有孔	Without 无
D	<6.35		With 有孔	Without 无
G	>6.35		With 有孔	Double 双面
K	<6.35		With 有孔	Double 双面
M	>6.35		With 有孔	Single 单面
P	<6.35		With 有孔	Single 单面



⑫ Incribed circle 内切圆直径 iC

⑬ Insert thickness 厚度记号

⑭ Nose radius 刀尖半径R记号

Inscribed circle 内切圆直径 iC(mm)	Mark 记号	
	Standard 普通系列	Small size 小型系列
3.97	—	5
4.76	—	6
5.56	—	7
6.35	2	(8)
7.94	—	0
9.525	3	—
12.70	4	—
15.875	5	—
19.05	6	—
22.225	7	—
25.40	8	—
31.75	0	—

Thickness 厚度 (mm)	小手 6.35mm 内切圆直径 iC	大手 6.35mm 内切圆直径 iC
	1.59	2
2.38	3	—
3.18	4	2
3.97	5	—
4.76	6	3
5.56	—	4
7.94	—	5
9.52	—	6

Nose radius r_e 刀尖半径 r_e (mm)	Mark 记号
Sharp edge 尖刃	V
0.2	0
0.4	1
0.8	2
1.2	3
1.6	4
2.0	5
2.4	6
2.8	7
3.2	8
Chamfer 平倒角	Z

⑮ Hand of tool=feed direction 方向记号

