

# Turning Indexable Inserts Identification System

B



Insert (Turning)

Symbol	Shape
H	120°Hexagon
O	135°Octagon
P	108°Pentagon
S	90°Square
T	60°Triangle
C	80°Diamond
D	55°Diamond
E	75°Diamond
F	50°Diamond
M	86°Parallelogram
V	35°Diamond
W	80°Trigon
L	90°Rectangle
A	85°Parallelogram
B	82°Parallelogram
K	55°Parallelogram
R	Round

Shown angle stands for acute angle for diamond and parallelogram inserts.

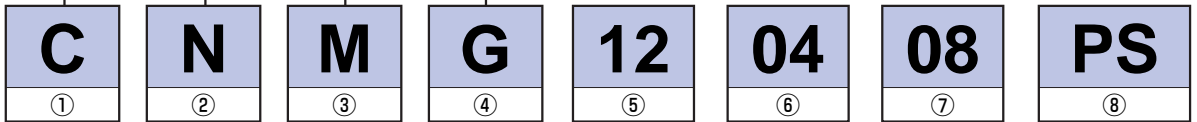
Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°

Symbol (class)	Tolerance (mm)		
	Corner Height	Thickness	I.C. Size
A	±0.005	±0.025	±0.025
F			±0.013
C	±0.013		±0.025
H			±0.013
E	±0.025	±0.13	±0.025
G			±0.025
J	±0.005	±0.05~±0.15	±0.05~±0.15
K*	±0.013		
L*	±0.025		
M*	±0.08~±0.18		
N*	±0.13~±0.38	±0.13	±0.08~±0.25
U*		±0.025	

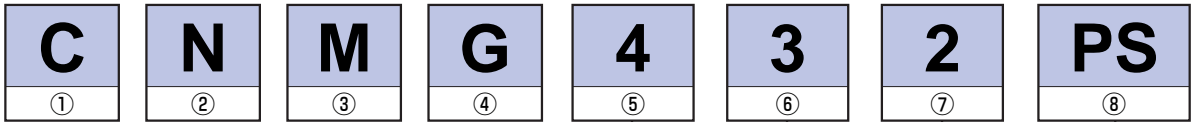
\*Insert's periphery is as fired.  
Tolerance difference is depending on insert size.

Symbol	Hole	Hole Shape	Inserts Chipbreaker	Shape
N	No	-	No	
R			One Side	
F			Two Sides	
A	With Hole	-	No	
M			One Side	
G		Two Sides		
W		With Hole and One Countersink 40°-60°	One Side	
T			No Side	
Q		With Hole and Two Countersink 40°-60°	No	
U			Two Sides	
B		With Hole and One Countersink 70°-90°	No	
H			One Side	
C		With Hole and Two Countersink 70°-90°	No	
J	Two Sides			
X	-	-	-	-

ISO (metric)



ANSI (inch)



⑤ Edge Length Symbol (ISO)							I.C. Size (mm)	⑤ I.C. Size (ANSI)	
C	D	R	S	T	V	W		IC Size (inch)	Symbol
03	04		03	06			3.97	5/32	1.2
04	05		04	08	08		4.76	3/16	1.5
		05					5		
05	06		05	09			5.56	7/32	1.8
		06					6		
06	07		06	11	11	04	6.35	1/4	2
08	09		07	13		05	7.94	5/16	2.5
		08					8		
09	11	09	09	16	16	06	9.525	3/8	3
		12	10				10		
		12					12		
12	15	12	12	22	22	08	12.7	1/2	4
16	19	15	15	27	27	10	15.875	5/8	5
		16					16		
19	23	19	19	33	33	13	19.05	3/4	6
		20					20		
22	27		22	38			22.225	7/8	7
		25					25		
25	31	25	25	44	44	17	25.4	1	8
32	38	31	31	54	54	21	31.75	1-1/4	10
		32					32		

⑥ Thickness Symbol			
ISO		ANSI	
Thickness (mm)	Symbol	Thickness (inch)	Symbol
1.59	01	1/16	1(2)
2.38	02	3/32	1.5(3)
2.78	T2	-	-
3.18	03	1/8	2
3.97	T3	5/32	2.5
4.76	04	3/16	3
6.35	06	7/32	3.5
7.94	07	1/4	4
9.525	09	5/16	5

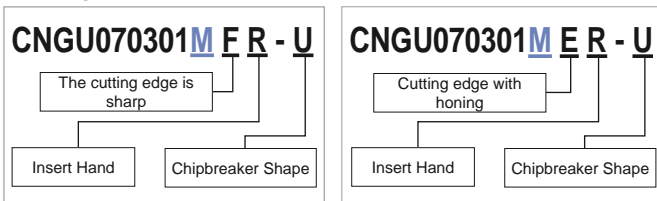
Thickness displayed as the distance between bottom surface and highest point on cutting edge.

⑦ Corner-R(re) Symbol			
ISO		ANSI	
Corner-R (re:mm)	Symbol	Corner-R (re:inch)	Symbol
Sharp Corner	00	.000	00
0.03	003	.001	0.1
0.1	01	.004	0.2
0.2	02	.008	0.5
0.4	04	1/64	1
0.8	08	1/32	2
1.2	12	3/64	3
1.6	16	1/16	4
2.0	20	5/64	5
2.4	24	3/32	6
2.8	28	7/64	7
3.2	32	1/8	8
Round Insert	00 (inch) or MO (metric)	Round Insert	0

⑧ Manufacturer's Option  
Hand Symbol, Chipbreaker Symbol, etc.

- Expressed as edge length for ISO.
- ANSI expresses the inscribed circle diameter in inches.

● Usage example of manufacture's option



Minus tolerance for Corner-R(re) dimension tolerance of G Class (Ground Class)

- M: Corner-R(re) represents minus tolerance. This is for convenience when drawing instruction R is "minus tolerance".

Corner-R(re) = Drawing Instruction R