

ANSI

C	N	M	G	4	3	2			CS
1	2	3	4	5	6	7	8	9	10

ISO

C	N	M	G	12	04	08			CS
1	2	3	4	5	6	7	8	9	10

1 Shape

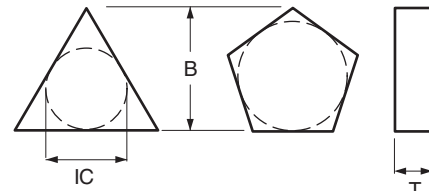
Symbol	Shape
A	85° Parallelogram
B	82° Parallelogram
C	80° Diamond
D	55° Diamond
E	75° Diamond
F	50° Diamond
H	120° Hexagon
K	55° Parallelogram
L	90° Rectangle
M	86° Parallelogram
O	135° Octagon
P	108° Pentagon
R	Round
S	90° Square
T	60° Triangle
V	35° Diamond
W	80° Trigon

2 Relief Angle

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

* P may also be 10°

3 Tolerance



Class	B (+/-)		IC (+/-)		T (+/-)	
	ANSI (in)	ISO (mm)	ANSI (in)	ISO (mm)	ANSI (in)	ISO (mm)
A	.0002	.005	.001	.025	.001	.025
B	.0002	.005	.001	.025	.005	.13
C	.0005	.013	.001	.025	.001	.025
D	.0005	.013	.001	.025	.005	.13
E	.001	.025	.001	.025	.001	.025
F	.0002	.005	.0005	.013	.001	.025
G	.001	.025	.001	.025	.005	.13
H	.0005	.013	.0005	.013	.001	.025
J*	.0002	.005	.002-.006	.05-.15	.001	.025
K*	.0005	.013	.002-.006	.05-.15	.001	.025
L*	.001	.025	.002-.006	.05-.15	.001	.025
M*	.003-.008	.08-.20	.002-.006	.05-.15	.005	.13
N*	.003-.008	.08-.20	.002-.006	.05-.15	.001	.025
U*	.005-.015	.13-.38	.003-.010	.08-.25	.005	.13

* Tolerance depends on the size and shape of the insert

4 Type

Symbol	Hole	Hole Shape	Chip-breaker	Hole Shape	Old Symbol	Normal	Small
N	Without hole	-	No		N	E	
R			One side		R	S	
F			Two sides		F	L	
A	With Hole	With Hole	No		A	D	
M			One side		M	P	
G			Two sides		G	K	
W		With hole & 1 countersink 40°-60°	No		A	D	
T			One side		M	P	
Q		With hole & 2 countersinks 40°-60°	No		A	D	
U			Two sides		G	K	
B		With hole & 1 countersink 70°-90°	No		A	D	
H			One side		M	P	
C		With hole & 2 countersinks 70°-90°	No		A	D	
J			Two sides		G	K	
X		-	-		X	X	

5 Insert Size									
ANSI		ISO							
I.C. Size (in)	Symbol	I.C. Size (mm)	Symbol (new)						
5/32	1.2	3.97	06	03	03	04			
3/16	1.5	4.76	08	04	04	05	08		
								05	
7/32	1.8	5.56	09	05	05	06			03
		6.0						06	
1/4	2	6.35	11	06	06	07	11	06	04
5/16	2.5	7.94	13	07	08	09		07	05
		8.0						08	
3/8	3	9.525	16	09	09	11	16	09	06
		10.0						10	
		12.0		12				12	
1/2	4	12.7	22	12	12	15	22	12	08
5/8	5	15.875	27	15	16	19	27	15	10
		16.0		16				16	
3/4	6	19.05	33	19	19	23	33	19	13
		20.0		20				20	
7/8	7	22.225	38	22	22	27	38	22	15
		25.0		25				25	
1	8	25.4	44	25	25	31	44	25	17
1 1/4	10	31.75	53	31	32	38	54	31	21
		32.0		32				32	

7 Corner-R			
Symbol		Corner Radius	
inch	metric	inch	mm
00	00	.000	0.00
0.1	003	.001	0.03
0.2	01	.004	0.1
0.5	02	.008	0.2
1	04	1/64	0.4
2	08	1/32	0.8
3	12	3/64	1.2
4	16	1/16	1.6
5	20	5/64	2.0
6	24	3/32	2.4
7	28	7/64	2.8
8	32	1/8	3.2
-	00	round insert(inch)	
-	M0	round insert (metric)	

6 Thickness			
Symbol		Dimension	
ANSI	ISO	in	mm
0.5(1)	-	1/32	0.79
0.6	T0	.040	1.00
1(2)	01	1/16	1.59
1.2	T1	5/64	1.98
1.5(3)	02	3/32	2.38
2	03	1/8	3.18
2.5	T3	5/32	3.97
3	04	3/16	4.76
3.5	05	7/32	5.56
4	06	1/4	6.35
5	07	5/16	7.94
6	09	3/8	9.52
7	11	7/16	11.11
8	12	1/2	12.70

8 Edge Preparation	
Symbol	Preparation
AA	Honed (.0004"-.0012")
A	Honed (.001"-.003")
B	Honed (.003"-.005")
C	Honed (.005"-.007")
D	Honed (.001"-.002")
F	Sharp Edge
J	Polished to 4 micron AA*
T	Protective chamfer

* Rake face only

9 Hand of Tool	
L Left Hand	
R Right Hand	
N Neutral	

10 Chipbreakers	
CERATIP offers a variety of general and specific chipbreaker styles. The special chipbreakers are identified by one or two letters in the last position of the insert order number, while the general chipbreakers have no specific code letters.	

Note: -P refers to a surface polish treatment
-T refers to a tough edge prep