

INSERT DESIGNATION - ISO

SHAPE

A = K = R =

B = L = S =

C = M = T =

D = O = V =

E = P = W =

H =

CLEARANCE

N = D =

A = E =

B = F =

C = G =

P =

LENGTH OF CUTTING EDGE

If less than 10 use 0 in first place.
Example: 9.525=09

CORNER

00 = Round Insert 12 = 1.2mm
 00 = Sharp Corner 16 = 1.6mm
 02 = 0.2mm 24 = 2.4mm
 04 = 0.4mm 32 = 3.2mm
 08 = 0.8mm 40 = 4.0mm

A = Square w/45° chamfer
 D = Square w/30° chamfer
 E = Square w/15° chamfer
 K = Square w/15° double chamfer
 N = Truncated triangle insert
 P = Flattened corner triangle

C N M G . 12 04 08

TOLERANCE (mm)

d	m	t
A = ± 0.025	± 0.005	± 0.025
F = ± 0.013	± 0.005	± 0.025
C = ± 0.025	± 0.013	± 0.025
H = ± 0.013	± 0.013	± 0.025
E = ± 0.025	± 0.025	± 0.025
G = ± 0.025	± 0.025	± 0.130
*J = ± 0.05 to ± 0.15	± 0.005	± 0.025
*K = ± 0.05 to ± 0.15	± 0.013	± 0.025
*L = ± 0.05 to ± 0.15	± 0.025	± 0.025
*M = ± 0.05 to ± 0.15	± 0.08 to ± 0.20	± 0.130
*N = ± 0.05 to ± 0.15	± 0.08 to ± 0.20	± 0.025
*U = ± 0.08 to ± 0.25	± 0.13 to ± 0.38	± 0.130

GEOMETRY

A = H = R =

B = J = T =

C = M = U =

F = N = W =

G = Q = X = Special Design

THICKNESS

If less than 10 use 0 in first place.
Example: 3.18=03

Geometry:

B, C, H, J - countersink is between 70~90 degrees.
 Q, T, U, W - countersink is between 40~60 degrees.

* Exact tolerance is determined by the size of the insert.

INSERT DESIGNATION - ANSI

SHAPE

A= K= R=
 B= L= S=
 C= M= T=
 D= O= V=
 E= P= W=
 H=

CLEARANCE

N= D=
 A= E=
 B= F=
 C= G=
 P=

INSCRIBED CIRCLE

Number of 1/16's on inserts less than 1/4" I.C.

Number of 1/8's on inserts 1/4" I.C. and over

Rectangle and parallelogram inserts require two digits:
 -1st, Number of 1/8's in width
 -2nd, Number of 1/4's in length

1.8 = 7/32" 5 = 5/8"
 2 = 1/4" 6 = 3/4"
 3 = 3/8" 8 = 1"
 4 = 1/2"

CORNER

0 = Sharp Corner 4 = 1/16" radius
 .5 = 0.008" radius 6 = 3/32" radius
 1 = 1/64" radius 8 = 1/8" radius
 2 = 1/32" radius 12 = 3/16" radius
 3 = 3/64" radius

A= Square w/45° chamfer
 D= Square w/30° chamfer
 E= Square w/15° chamfer
 K= Square w/15° double chamfer
 N= Truncated triangle insert
 P= Flattened corner triangle

C N M G . 4 3 2

TOLERANCE (in)

d	m	t
A = ± .0010	± .0002	± .001
F = ± .0005	± .0002	± .001
C = ± .0010	± .0005	± .001
H = ± .0005	± .0005	± .001
E = ± .0010	± .0010	± .001
G = ± .0010	± .0010	± .005
**J = ± .002 to ± .006	± .0002	± .001
**K = ± .002 to ± .006	± .0005	± .001
**L = ± .002 to ± .006	± .0010	± .001
**M = ± .002 to ± .006	± .003 to ± .008	± .005
**N = ± .002 to ± .006	± .003 to ± .008	± .001
**U = ± .003 to ± .010	± .005 to ± .015	± .005

GEOMETRY

A= H= Q=
 B= J= R=
 C= *K= T=
 *D= *L= U=
 *E= M= W=
 F= N= X= Special Design
 G=

THICKNESS

Number of 1/32's on inserts less than 1/4" I.C.

Number of 1/16's on inserts 1/4" I.C. and over

1 = 1/16" 3 = 3/16"
 1.5 = 3/32" 4 = 1/4"
 2 = 1/8" 5 = 5/16"
 2.5 = 5/32" 6 = 3/8"

* Smaller than 1/4" I.C.
 ** Exact tolerance is determined by the size of the insert.

Geometry:
 B, C, H, J - countersink is between 70-90 degrees.
 Q, T, U, W - countersink is between 40-60 degrees.

TOOLHOLDER TECHNICAL INFORMATION

A = Straight shank w/0° side cutting edge angle
B = Straight shank w/15° side cutting edge angle
C = Shank w/0° end cutting edge angle
D = Straight shank w/4° side cutting edge angle
E = Straight shank w/30° side cutting edge angle
F = Offset shank w/0° end cutting edge angle
G = Offset shank w/0° side cutting edge angle
J = Offset shank w/negative 3° side cutting angle
K = Offset shank w/15° end cutting edge angle
L = Offset shank w/negative 5° end or side cutting angle
M = Straight shank w/50° side cutting edge angle
P = Straight shank w/27° side cutting edge angle
R = Offset shank w/15° side cutting edge angle
S = Offset shank w/45° side cutting edge angle
V = Straight shank w/17.5° side cutting edge angle
W = Offset shank w/10° side cutting edge angle

C = Clamp lock assembly (PC Tool-holders)
M = Multiple lock assembly (Pin & clamp lock) (M-type Tool-holders)
P = Pin lock assembly (NL/PL Tool-holders)
S = Screw lock

METHOD OF HOLDING

TOOL-HOLDER STYLE

L = Left
N = Neutral
R = Right

HAND OF TOOL

For square shank, the number represents the sixteenths (1/16) of width and height.

6 = 3/8" square
8 = 1/2" square
10 = 5/8" square
12 = 3/4" square
16 = 1" square
20 = 1-1/4" square
24 = 1-1/2" square

For rectangular shanks, the first digit represents the number of eighths (1/8) of width and the second digit represents the number of quarters of height.

64 = 3/4 x 1"
85 = 1 x 1-1/4"
86 = 1 x 1-1/2"

TOOLHOLDER SHANK SIZE

M

C

L

N

R

□

12

-

4

B

INSERT SHAPE

C = 80° Diamond
D = 55° Diamond
R = Round
S = Square
T = Triangle
V = 35°
W = Trigon

RAKE ATTITUDE

N = Negative
O = Neutral
P = Positive
C = Neutral-accepts 7° clearance inserts
B = Neutral-accepts 5° clearance inserts

POCKET STYLE

S = Single wall pocket construction.
 Full pocket construction, when letter position is vacant

INSERT SIZE I.C.

Number of eighths (1/8) of I.C. (inscribed Circle)

Insert less than 1/4" I.C.

5 = 5/32"
6 = 3/16"
7 = 7/32"

Inserts 1/4" I.C. and cover (in.)

2 = 1/4"
2.5 = 5/16"
3 = 3/8"
4 = 1/2"
5 = 5/8"
6 = 3/4"

QUALIFIED SURFACE & LENGTH

A = Qualified back & end, 4" long
B = Qualified back & end, 4.5" long
C = Qualified back & end, 5" long
D = Qualified back & end, 6" long
E = Qualified back & end, 7" long
F = Qualified back & end, 8" long
J = Qualified back & end, 3.5" long
M = Qualified back & end, 4" long
N = Qualified back & end, 4.5" long
P = Qualified back & end, 5" long
R = Qualified back & end, 6" long
S = Qualified back & end, 7" long
T = Qualified back & end, 8" long

INDEXABLE BORING BAR IDENTIFICATION SYSTEM

