

## Polycrystalline Diamond(PCD) & Cubic Boron Nitride (CBN) Tipped Inserts

C Series -- 80° Diamond Inserts (Custom-Made inserts are available)

| Pictures  | Insert No#    |            | Inscribed Circle D | S         | R      | H        |
|-----------|---------------|------------|--------------------|-----------|--------|----------|
|           | ANSI          | ISO        |                    | Thickness | Radius | Hole Dia |
|           | CCGW2150      | CCGW060200 | 0.250              | 0.094     | 0.004  | 0.110    |
|           | CCGW21.50.5   | CCGW060202 | 0.250              | 0.094     | 0.008  | 0.110    |
|           | CCGW21.51     | CCGW060204 | 0.250              | 0.094     | 0.016  | 0.110    |
|           | CCGW21.52     | CCGW060208 | 0.250              | 0.094     | 0.031  | 0.110    |
|           | CCGW3250      | CCGW09T300 | 0.375              | 0.156     | 0.004  | 0.173    |
|           | CCGW32.50.5   | CCGW09T302 | 0.375              | 0.156     | 0.008  | 0.173    |
|           | CCGW32.51     | CCGW09T304 | 0.375              | 0.156     | 0.016  | 0.173    |
|           | CCGW32.52     | CCGW09T308 | 0.375              | 0.156     | 0.031  | 0.173    |
|           | CCGW431       | CCGW120404 | 0.500              | 0.188     | 0.016  | 0.216    |
|           | CCGW432       | CCGW120408 | 0.500              | 0.188     | 0.031  | 0.216    |
|           | CCGW433       | CCGW120412 | 0.500              | 0.188     | 0.047  | 0.216    |
|           |               | CNGA322    | CNGA090308         | 0.375     | 0.125  | 0.031    |
| CNGA422   |               | CNGA120308 | 0.500              | 0.125     | 0.031  | 0.203    |
| CNGA430.5 |               | CNGA120402 | 0.500              | 0.188     | 0.008  | 0.203    |
| CNGA431   |               | CNGA120404 | 0.500              | 0.188     | 0.016  | 0.203    |
| CNGA432   |               | CNGA120408 | 0.500              | 0.188     | 0.031  | 0.203    |
| CNGA433   |               | CNGA120412 | 0.500              | 0.188     | 0.047  | 0.203    |
| CNGA434   |               | CNGA120416 | 0.500              | 0.188     | 0.062  | 0.203    |
| CNGA542   |               | CNGA160608 | 0.625              | 0.250     | 0.031  | 0.216    |
| CNGA543   |               | CNGA160612 | 0.625              | 0.250     | 0.047  | 0.216    |
| CNGA642   |               | CNGA190608 | 0.750              | 0.250     | 0.031  | 0.264    |
| CNGA643   |               | CNGA190612 | 0.750              | 0.250     | 0.047  | 0.264    |
| CNGA644   |               | CNGA190616 | 0.750              | 0.250     | 0.062  | 0.264    |
|           | CNGN322       | CNGN090308 | 0.375              | 0.125     | 0.031  | *        |
|           | CNGN323       | CNGN090312 | 0.375              | 0.125     | 0.047  | *        |
|           | CNGN324       | CNGN090316 | 0.375              | 0.125     | 0.062  | *        |
|           | CNGN331       | CNGN090404 | 0.375              | 0.188     | 0.016  | *        |
|           | CNGN332       | CNGN090408 | 0.375              | 0.188     | 0.031  | *        |
|           | CNGN433       | CNGN120412 | 0.500              | 0.188     | 0.047  | *        |
|           | CNGN434       | CNGN120416 | 0.500              | 0.188     | 0.062  | *        |
|           | CPGA31.50.5   | CPGA090202 | 0.375              | 0.094     | 0.008  | 0.150    |
|           | CPGA31.51     | CPGA090204 | 0.375              | 0.094     | 0.016  | 0.150    |
|           | CPGA31.52     | CPGA090208 | 0.375              | 0.094     | 0.031  | 0.150    |
|           | CPGA320.5     | CPGA090302 | 0.375              | 0.125     | 0.008  | 0.173    |
|           | CPGA321       | CPGA090304 | 0.375              | 0.125     | 0.016  | 0.173    |
|           | CPGA322       | CPGA090308 | 0.375              | 0.125     | 0.031  | 0.173    |
|           | CPG421        | CPGN120304 | 0.500              | 0.125     | 0.016  | *        |
|           | CPG422        | CPGN120308 | 0.500              | 0.125     | 0.031  | *        |
|           | CPG423        | CPGN120312 | 0.500              | 0.125     | 0.047  | *        |
|           | CPG431        | CPGN120404 | 0.500              | 0.188     | 0.016  | *        |
|           | CPG432        | CPGN120408 | 0.500              | 0.188     | 0.031  | *        |
|           | CPG433        | CPGN120412 | 0.500              | 0.188     | 0.047  | *        |
|           | CPGW1.81.50.5 | CPGW050202 | 0.219              | 0.094     | 0.008  | 0.098    |
|           | CPGW1.81.51   | CPGW050204 | 0.219              | 0.094     | 0.016  | 0.098    |
|           | CPGW1.81.52   | CPGW050208 | 0.219              | 0.094     | 0.031  | 0.098    |
|           | CPGW21.50     | CPGW060200 | 0.250              | 0.094     | 0.004  | 0.110    |
|           | CPGW21.50.5   | CPGW060202 | 0.250              | 0.094     | 0.008  | 0.110    |
|           | CPGW21.51     | CPGW060204 | 0.250              | 0.094     | 0.016  | 0.110    |
|           | CPGW21.52     | CPGW060208 | 0.250              | 0.094     | 0.031  | 0.110    |
|           | CPGW21.53     | CPGW060212 | 0.250              | 0.094     | 0.047  | 0.110    |
|           | CPGW320.5     | CPGW090302 | 0.375              | 0.125     | 0.008  | 0.173    |
|           | CPGW321       | CPGW090304 | 0.375              | 0.125     | 0.016  | 0.173    |
|           | CPGW32.50     | CPGW09T300 | 0.375              | 0.156     | 0.004  | 0.173    |
|           | CPGW32.50.5   | CPGW09T302 | 0.375              | 0.156     | 0.008  | 0.173    |

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### C Series -- 80° Diamond Inserts (Custom-Made inserts are available)

| Pictures | Insert No# |            | Inscribed Circle D | S         | R      | H        |
|----------|------------|------------|--------------------|-----------|--------|----------|
|          | ANSI       | ISO        |                    | Thickness | Radius | Hole Dia |
|          | CPGW32.51  | CPGW09T304 | 0.375              | 0.156     | 0.016  | 0.173    |
|          | CPGW32.52  | CPGW09T308 | 0.375              | 0.156     | 0.031  | 0.173    |
|          | CPGW32.53  | CPGW09T312 | 0.375              | 0.156     | 0.047  | 0.173    |
|          | CPGW431    | CPGW120404 | 0.500              | 0.188     | 0.016  | 0.216    |
|          | CPGW432    | CPGW120408 | 0.500              | 0.188     | 0.031  | 0.216    |
|          | CPGW433    | CPGW120412 | 0.500              | 0.188     | 0.047  | 0.216    |

### CDE MILLING INSERTS

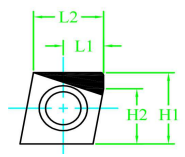
| Pictures | Insert No#    | L      | Inscribed Circle D | S         | R          | H        |
|----------|---------------|--------|--------------------|-----------|------------|----------|
|          | ANSI          | Length |                    | Thickness | Radius     | Hole Dia |
|          | CDE313-R01-E1 | 0.375  | 0.437              | 0.187     | 0.02 X 45° | 0.168    |
|          | CDE313-R15-E1 | 0.375  | 0.437              | 0.187     | 0.125      | 0.168    |
|          | CDE313-R64-E1 | 0.375  | 0.437              | 0.187     | 0.060      | 0.168    |
|          | CDE322-L02-E1 | 0.500  | 0.375              | 0.150     | 0.060      | 0.168    |
|          | CDE322-L03-E1 | 0.500  | 0.375              | 0.150     | 0.090      | 0.168    |
|          | CDE322-L04-E1 | 0.500  | 0.375              | 0.150     | 0.125      | 0.168    |
|          | CDE322-L05-E1 | 0.500  | 0.375              | 0.150     | 0.031      | 0.168    |
|          | CDE322-R02-E1 | 0.500  | 0.375              | 0.150     | 0.060      | 0.168    |
|          | CDE322-R03-E1 | 0.500  | 0.375              | 0.150     | 0.090      | 0.168    |
|          | CDE322-R04-E1 | 0.500  | 0.375              | 0.150     | 0.125      | 0.168    |
|          | CDE322-R05-E1 | 0.500  | 0.375              | 0.150     | 0.031      | 0.168    |
|          | CDE322-R10-E1 | 0.500  | 0.375              | 0.150     | 0.015      | 0.168    |
|          | CDE323-L05-E1 | 0.500  | 0.375              | 0.187     | 0.031      | 0.168    |
|          | CDE323-R01-E1 | 0.500  | 0.375              | 0.187     | 0.02 X 45° | 0.168    |
|          | CDE323-R05-E1 | 0.500  | 0.375              | 0.187     | 0.031      | 0.168    |
|          | CDE334-R04-E1 | 0.750  | 0.375              | 0.250     | 0.030      | 0.168    |
|          | CDE334-R09-E1 | 0.750  | 0.375              | 0.250     | 0.030      | 0.168    |
|          | CDE424-R01-E1 | 0.500  | 0.562              | 0.250     | 0.02 X 45° | 0.168    |
|          | CDE424-R22-E1 | 0.500  | 0.562              | 0.250     | 0.060      | 0.168    |
|          | CDE424-R24-E1 | 0.500  | 0.562              | 0.250     | 0.125      | 0.168    |

### C-Series Full PCD Top -- 80° Inserts (FF: Full PCD Face)

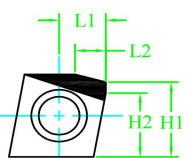
| Pictures             | Insert No#   |            | Inscribed Circle D | S         | R      | H        |
|----------------------|--------------|------------|--------------------|-----------|--------|----------|
|                      | ANSI         | ISO Code   |                    | Thickness | Radius | Hole Dia |
| <p>CNGA Full Top</p> | CNGA430.5-FF | CNGA120402 | 0.500              | 0.188     | 0.008  | 0.203    |
|                      | CNGA431-FF   | CNGA120404 | 0.500              | 0.188     | 0.016  | 0.203    |
|                      | CNGA432-FF   | CNGA120408 | 0.500              | 0.188     | 0.031  | 0.203    |
|                      | CNGA433-FF   | CNGA120412 | 0.500              | 0.188     | 0.047  | 0.203    |
|                      | CNGA434-FF   | CNGA120416 | 0.500              | 0.188     | 0.062  | 0.203    |
| <p>CNGN Full Top</p> | CNGN321-FF   | CNGN090304 | 0.375              | 0.125     | 0.016  | *        |
|                      | CNGN322-FF   | CNGN090308 | 0.375              | 0.125     | 0.031  | *        |
|                      | CNGN323-FF   | CNGN090312 | 0.375              | 0.125     | 0.047  | *        |
|                      | CNGN324-FF   | CNGN090316 | 0.375              | 0.125     | 0.062  | *        |
|                      | CNGN331-FF   | CNGN090404 | 0.375              | 0.188     | 0.016  | *        |
|                      | CNGN332-FF   | CNGN090408 | 0.375              | 0.188     | 0.031  | *        |
|                      | CNGN431-FF   | CNGN120404 | 0.500              | 0.188     | 0.016  | *        |
|                      | CNGN432-FF   | CNGN120412 | 0.500              | 0.188     | 0.031  | *        |
|                      | CNGN433-FF   | CNGN120412 | 0.500              | 0.188     | 0.047  | *        |
|                      | CNGN434-FF   | CNGN120416 | 0.500              | 0.188     | 0.062  | *        |

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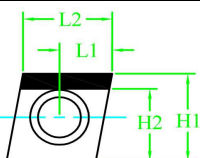
### C-Series 90° Lead Angle (L1=0.212)

| Pictures  | Insert No#  |            | L1    | L2     | H1    | H2    |
|---|-------------|------------|-------|--------|-------|-------|
|   | ANSI        | ISO Code   |       | D.O.C. | I.C.  |       |
|  | CCGW32.51RP | CCGW09T304 | 0.212 | 0.270  | 0.375 | 0.290 |
|   | CCGW32.52RP | CCGW09T308 | 0.212 | 0.270  | 0.375 | 0.290 |
|   | CDGW32.51RP | CDGW09T304 | 0.212 | 0.270  | 0.375 | 0.290 |
|   | CDGW32.52RP | CDGW09T308 | 0.212 | 0.270  | 0.375 | 0.290 |
|   | CPGW32.51RP | CPGW09T304 | 0.212 | 0.270  | 0.375 | 0.290 |
|   | CPGW32.52RP | CPGW09T308 | 0.212 | 0.270  | 0.375 | 0.290 |

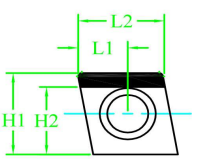
### C-Series 75° Lead Angle(L1=0.212)

| Pictures  | Insert No#  |            | L1    | L2     | H1    | H2    |
|---|-------------|------------|-------|--------|-------|-------|
|   | ANSI        | ISO Code   |       | D.O.C. |       |       |
|  | CCGW32.51RE | CCGW09T304 | 0.212 | 0.130  | 0.340 | 0.290 |
|   | CCGW32.52RE | CCGW09T308 | 0.212 | 0.130  | 0.340 | 0.290 |
|   | CDGW32.51RE | CDGW09T304 | 0.212 | 0.130  | 0.340 | 0.290 |
|   | CDGW32.52RE | CDGW09T308 | 0.212 | 0.130  | 0.340 | 0.290 |
|   | CPGW32.51RE | CPGW09T304 | 0.212 | 0.130  | 0.340 | 0.290 |
|   | CPGW32.52RE | CPGW09T308 | 0.212 | 0.130  | 0.340 | 0.290 |

### C-Series Full Edge R-Hand(L1=0.212)

| Pictures  | Insert No#  |            | L1    | L2     | H1    | H2    |
|---|-------------|------------|-------|--------|-------|-------|
|   | ANSI        | ISO Code   |       | D.O.C. | I.C.  |       |
|  | CCGW32.51RH | CCGW09T304 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CCGW32.52RH | CCGW09T308 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CDGW32.51RH | CDGW09T304 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CDGW32.52RH | CDGW09T308 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CPGW32.51RH | CPGW09T304 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CPGW32.52RH | CPGW09T308 | 0.212 | 0.350  | 0.375 | 0.300 |

### E-Series Full Edge L-Hand(L1=0.212)

| Pictures  | Insert No#  |            | L1    | L2     | H1    | H2    |
|---|-------------|------------|-------|--------|-------|-------|
|   | ANSI        | ISO Code   |       | D.O.C. | I.C.  |       |
|  | CCGW32.51LH | CCGW09T304 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CCGW32.52LH | CCGW09T308 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CDGW32.51LH | CDGW09T304 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CDGW32.52LH | CDGW09T308 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CPGW32.51LH | CPGW09T304 | 0.212 | 0.350  | 0.375 | 0.300 |
|   | CPGW32.52LH | CPGW09T308 | 0.212 | 0.350  | 0.375 | 0.300 |