1. **Inscribed Circle** - Defines a circle, which when drawn about the center of the tool insert, is inside and tangent to the tools edges. The inscribed circle is set to a min value of 0.010".

   The program will not allow you to use a value which is mathematically less than the above definition and will provide a default value in the input box.
   The figure below shows different inserts provided by a manufacturer.
   Note that the manufacturer specifies the inscribed circle which is shown inside the insert shape by a black circle.
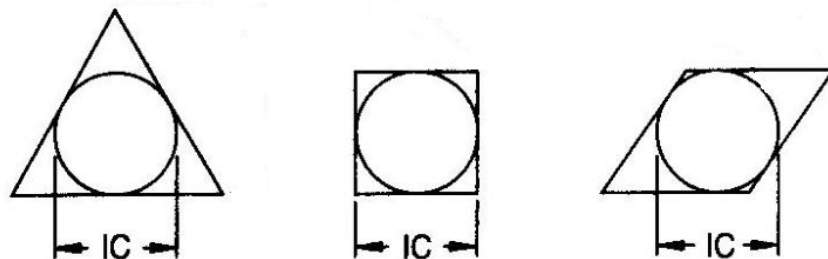
IC: theoretical diameter of the insert inscribed circle

FIGURE 5.13.2

NOTE:
A square tool with an inscribed circle of .01 cannot physically have a tool tip radius of .01, they cannot fit in the equation for a square. Hence, the tip is impossible by physical definition, and the tip will not be created. This will cause a fault when the program tries to match a collision. The fault will generate a "tip failure". If you were to try to create the tip with above radius, the tool looks round since its trying to fit the .01 tip radius on each of the 4 corners of a tool which has an inscribed radius of only .01. The tool generator will tell you its impossible. Additional comments are made in Appendix "E".