10 BASIC DIMENSIONING GUIDELINES *

1. **Do not over-dimension or under-dimension an object.** Every object must be completely and uniquely described, so that any distance or angle related to the object can be found, but only in **one way**.

2. Each dimension should be placed in a descriptive or characteristic view where the corresponding component may be seen clearly.

3. Dimensions should be located outside the boundaries of the object whenever possible.

4. Dimension lines should be aligned and grouped where possible to promote clarity and uniform appearance.

5. **Do not cross dimension lines** with extension lines or other dimension lines (note that extension lines may cross other extension lines).

6. When symmetry is used to reduce dimensioning complexity, a note must be added describing precisely the location of the axis of symmetry.

7. **Avoid dimensioning** to a hidden line.

8. Hole and Arc Details:
   A. Diameters (for circular features of 360 degrees) are dimensioned with a numerical value preceded by the diameter symbol (Ø) e.g. Ø5.0.
   B. Radii (for circular features of less than 360 degrees) are dimensioned with a numerical value preceded by the radius symbol (R) e.g. R5.0.
   C. A small cross is always used to locate the center of a circle. It is also used when the center of curvature for an arc needs to be located.

9. Dimensioning Cylinders:
   A. Dimension a **positive cylinder** (e.g. a rod) in a view perpendicular to where it appears as a circle, i.e. where the side of the cylinder appears as a rectangle. The symbol Ø is still required.
   B. Dimension a **negative cylinder** (e.g. a hole) in the view where it appears as a circle.

10. There should be a visible gap between the extension line and the feature being dimensioned. (Note that if the feature is interior to the object, there is no break in the extension line where it crosses the object boundary.)

*OVERALL CLARITY is the ultimate goal. However, if you break any of the above rules, the results should be distinctly clearer than what you could achieve without breaking the rules.*