SE101 Engineering Graphics and Design
Department of Industrial and Enterprise Systems Engineering
College of Engineering – UIUC

MA9 – Rendering and Animation

Use Inventor Studio to create a photorealistic rendering and an animation of the ball valve assembled earlier in the semester.

1. Create a rendered image of the ball valve assembly. Figure 1 gives an example.
    a. Use the surface style tool to add color and texture. Bold texture is recommended for a better printing result.
    b. Use the scene styles tool to provide a background and establish a ground plane (used when projecting shadows). You can also use your own image as a background.
    c. Use the Studio lighting styles tool to add image-based lights.
    d. Use either the viewing and display tools, or the camera tool to create a unique view. Using a view other than the standard isometric and using perspective projection can give an artistic touch.

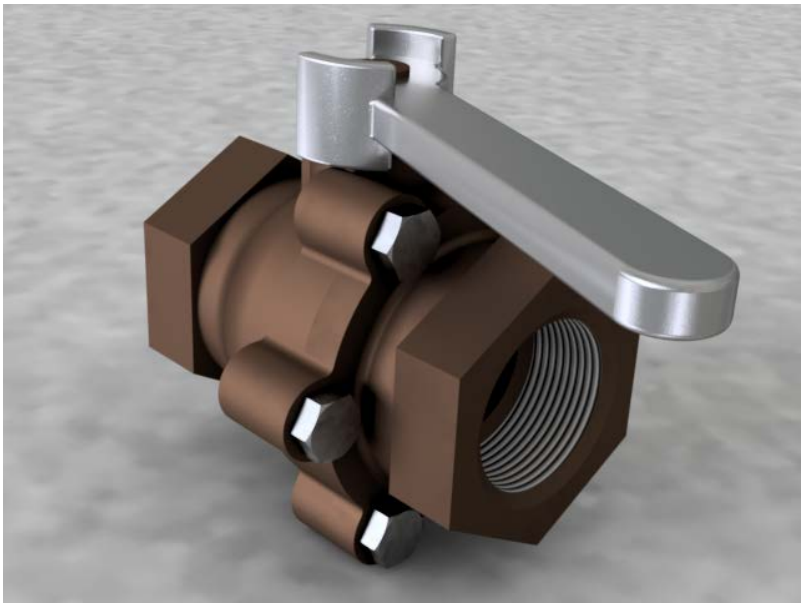

Figure 1: Rendered view of the ball valve

2. Create an animation of the ball valve in operation. All of the following animation options must be used (example animations of the ball valve are provided on Compass).
    a. Rotation of the handle to operate the valve (i.e., "Animate Constraints" or "Animate Components" tool).
    b. At least one component fade ("Animate Fade" tool) to show the internal movement of the ball valve as the handle turns.
    c. Three or more camera motions, showing the ball valve from several perspectives
    d. The animation should last for 10 seconds.
    e. Surface, lighting, and scene styles should be used.
    f. Use the "Render Animation" tool to create an **AVI** video file (Note: This is not the default type) of your animation. Use a 640 by 480 animation output size.
    g. At the video compression window, select the "**Microsoft Video 1**" to ensure a small file size while maintaining good video quality.