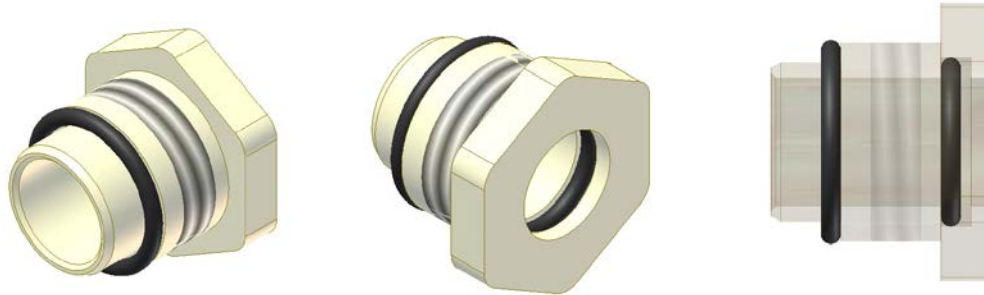


## Modeling Assignment 6

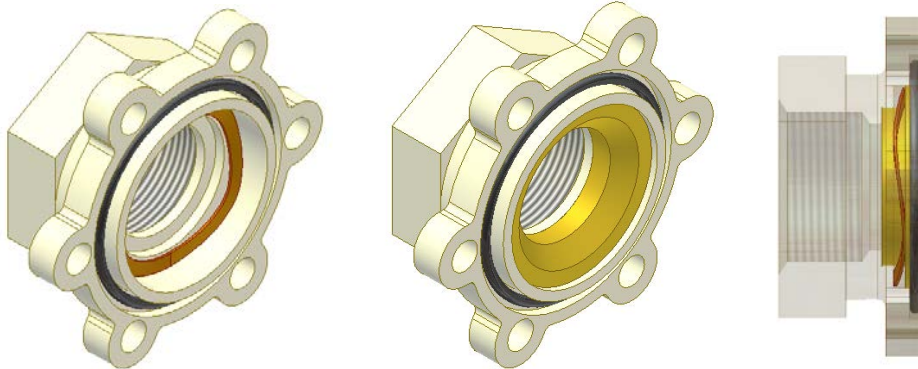
Use Inventor to create an assembly model of the ball valve. The ball valve parts are available in the MA6 folder in Compass. Be sure to assign materials to the parts as specified in the parts list in Figure 2 at Page 2. A successful assembly requires no interferences, and that the handle, pin, stem, and ball parts should be free to rotate 90 degrees in order to open and close the valve.


### Assembly Modeling Strategy

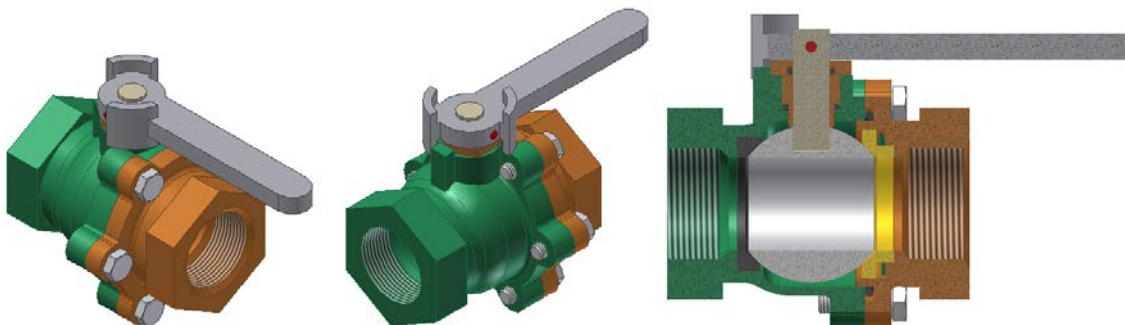
1. **Packing Nut Subassembly:** Packing Nut  (see footnote<sup>1</sup>), Oring2, Oring3 (footnote<sup>2</sup>)




2. **Body Cap Subassembly:** Body Cap , Oring1, Spring, Seat



3. **Ball Valve Assembly:** Body , Bumper, Packing Nut Subassembly, Stem, Ball, Handle, Pin, Body Cap Subassembly, ISO 4017 M8×25



<sup>1</sup> This icon  means that the part should be grounded (Unable to move after initial placement). A straight forward way is to place this part as the first component when creating a new assembly file.

<sup>2</sup> **Hint:** when constraining Orings or Spring to be placed adjacent to a flat surface, you may find it easiest to use a mate constraint between the flat surface and one of the Origin planes of the Oring or Spring – use an offset as necessary

Once the ball valve assembly has been created, create two scaled drawing files, an assembly view and an exploded view, similar to that as shown in Figures 1 and 2. In the assembly view, at least one section view of the assembly should be included. Use different hatch patterns for different sectioned parts. In the exploded view, add a parts list and balloons as shown in Figure 2

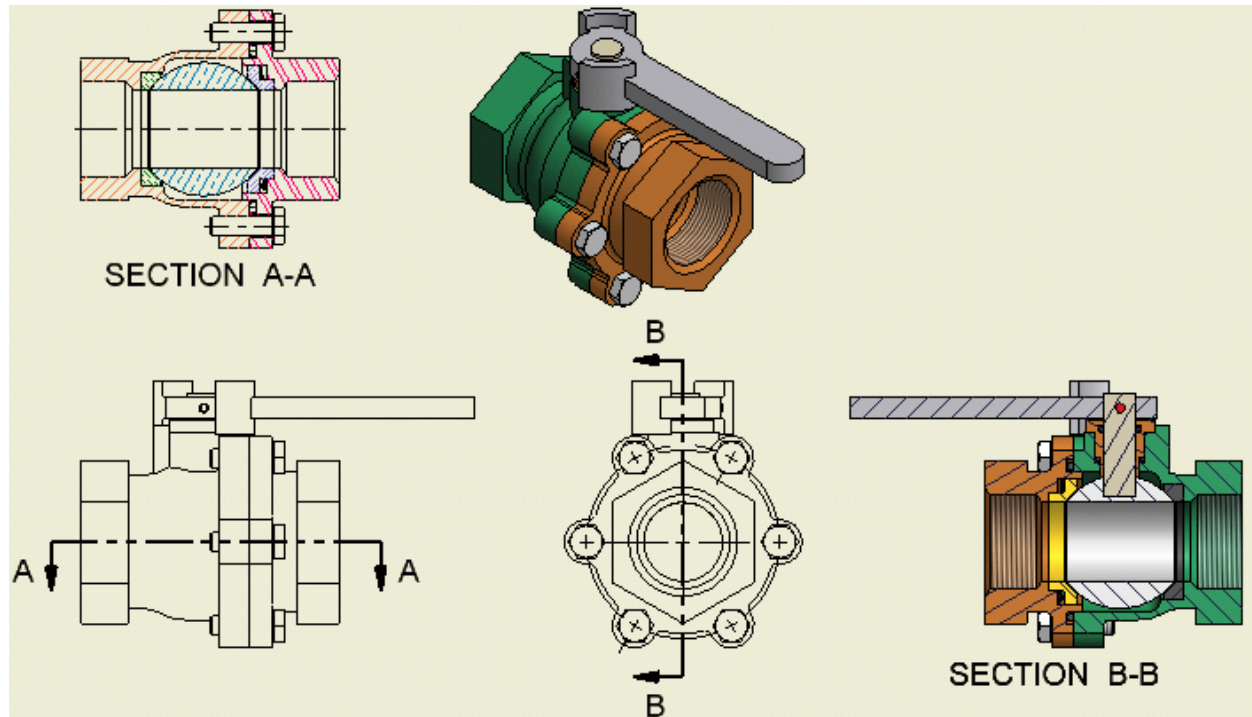


Figure 1: Assembly view drawing of ball valve

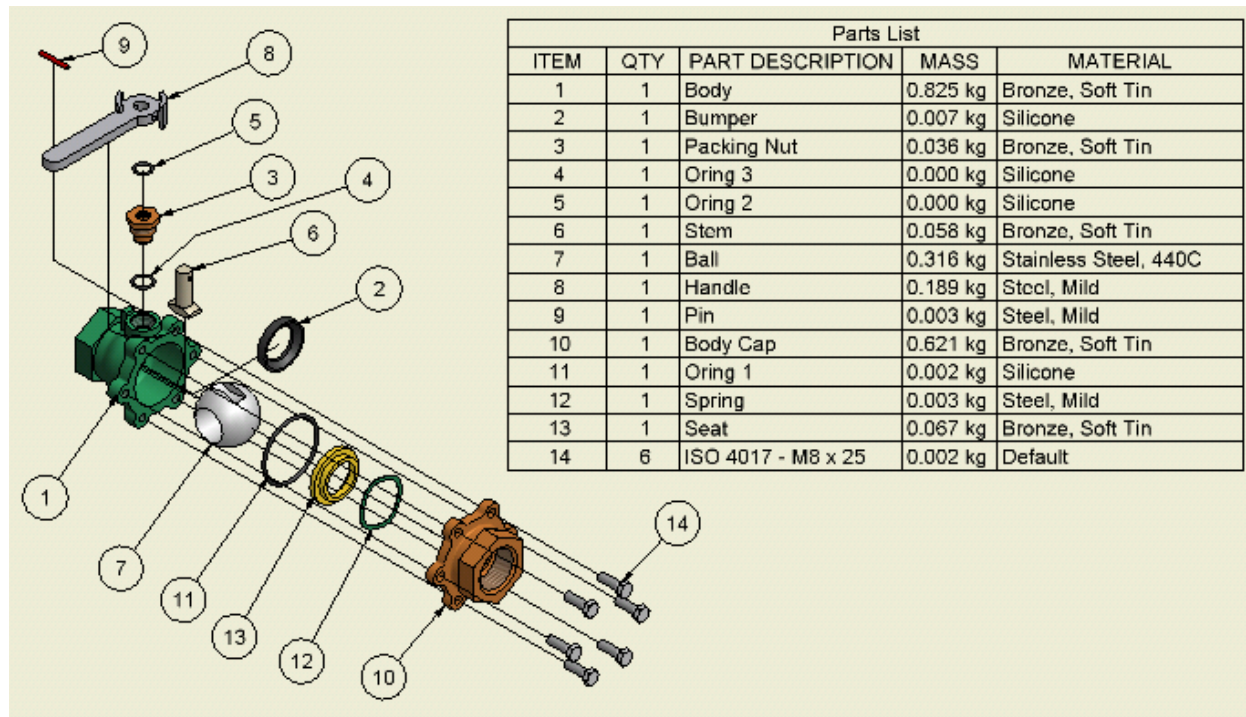


Figure 2: Exploded view drawing of ball valve