Student’s Project 1

Create all the components of the Butterfly Valve shown in Figure 1 and Figure 2 and then assemble them. The dimensions for the various components are given in Figure 3 through Figure 11. Assume the missing dimensions for the components.

Figure 1 Butterfly Valve assembly
Figure 2 Inside view of the Butterfly Valve
Figure 3 Solid model of the Body
Figure 4 Top view of the Body
Figure 5 Left side view of the Body
Figure 6 Sectioned front view of the Body
Figure 7  Top view of the Arm

Figure 8  Sectioned front view of the Arm

Figure 9  Dimensions of the Shaft

Figure 10  Dimensions of the Retainer

Figure 11  Dimensions of the Plate, the Nut, and the Screw
Create different components of the Double Bearing assembly and then assemble them as shown in Figure 12. Figure 13 shows the exploded view of the assembly. The dimensions of various components are given in Figure 14 to Figure 18.
Figure 14  Top view of the Cap

Figure 16  Top view of the Base

Figure 15  Front view of the Cap

Figure 17  Front view of the Base

Figure 18  Dimensions of the Bushing and the Bolt
Student's Project 3

In this tutorial you will create all the components of the Wheel Support assembly and then assemble them together as shown in Figure 19. The exploded view of the assembly is shown in Figure 20. The dimensions of the components are shown in Figure 21, to Figure 25.
Figure 20 Exploded view of the Wheel Support assembly

Figure 21 Dimensions of the Base

Figure 22 Dimensions of the Support
Figure 23  Front view of the Wheel

Figure 24  Sectioned side view of the Wheel

Figure 25  Dimensions of the Shoulder Screw, Bolt, Nut, Bushing, and Washer
Student’s Project 4

Create all the components of the Bracket Support assembly and then assemble them as shown in Figure 26. The Bill of Material is shown in Figure 27 and exploded view of the assembly is shown in Figure 28. The dimensions of the components are given in Figure 28 to Figure 33.

![Figure 26 Pulley Support assembly](image)

<table>
<thead>
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<th>PARTS LIST</th>
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</tr>
<tr>
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<td>Cap Screw</td>
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![Figure 27 Parts list for the Pulley Support assembly](image)
Figure 28 Exploded view of the Pulley Support assembly

Figure 29 Dimensions of the Pulley

Figure 30 Dimensions of the Bushing
Figure 31  Left side view of the Bracket

Figure 32  Sectioned front view of the Bracket

Figure 33  Dimensions of the Washer, Cap Screw, Turn Screw, and Nut