

Exercise 30: Pump Cover

Create this part using the dimensions provided. Use relations wisely to maintain the design intent.

This lab uses the following skills:

- *Shelling* on page 247.

Units: **millimeters**



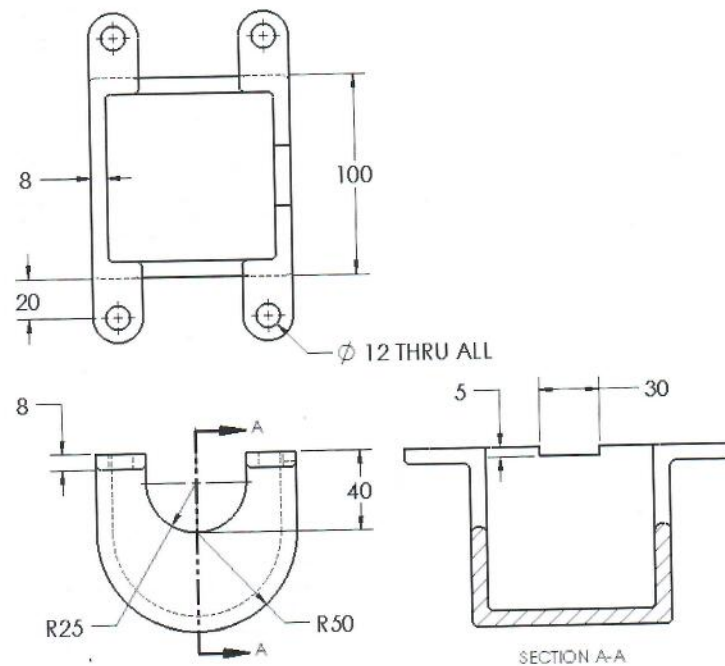
Design Intent

The design intent for this part is as follows:

1. The tabs are all equal size and shape.
2. Holes in the tabs are all equal.
3. All fillets are equal at radius **R3mm**.
4. Wall thickness is constant.
5. Slot is centered on edge.
6. Excluding the slot, part is symmetrical about two planes.

Dimensioned Views

Use the following graphics with the design intent to create the part.



**Exercise 31:
Compression
Plate**

Create this part using the dimensions provided. Use relations wisely to maintain the design intent.

This lab uses the following skills:

- *Shelling* on page 247.
- *Ribs* on page 250.
- *Converting Edges* on page 256.

Units: **millimeters**

**Design Intent**

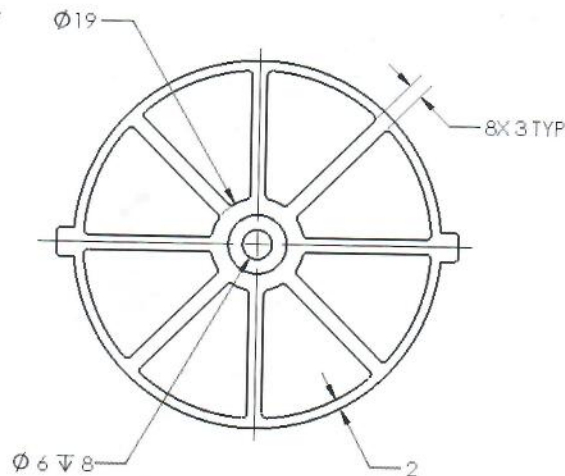
The design intent for this part is as follows:

1. Part is symmetrical.
2. Ribs are equally spaced.
3. All fillets and rounds are **1mm**.

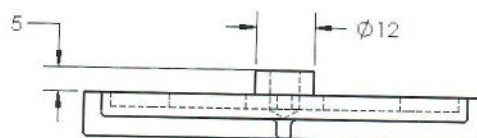
**Dimensioned
Views**

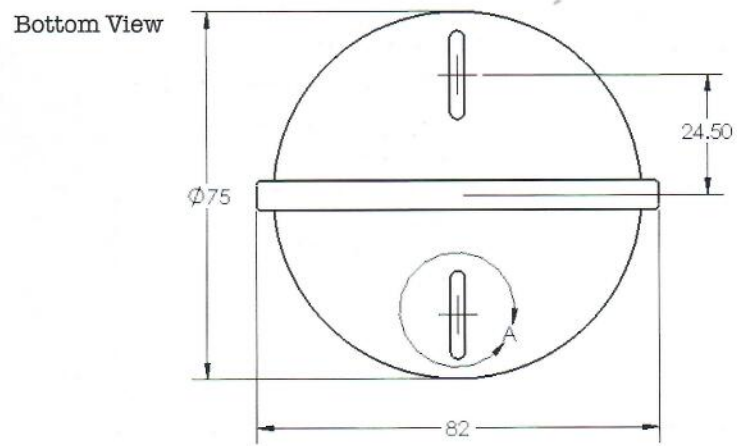
Use the following graphics with the design intent to create the part.

Top View

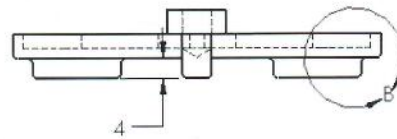


Front View

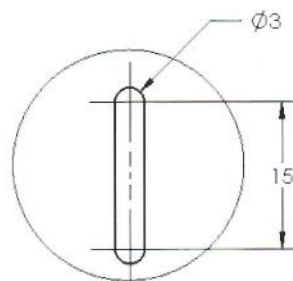




Right View

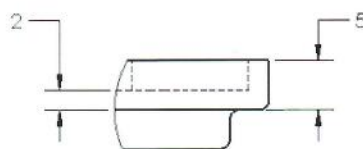


Detail A



DETAIL A
SCALE 2:1

Detail B



DETAIL B
SCALE 2:1

**Exercise 32:
Blow Dryer**

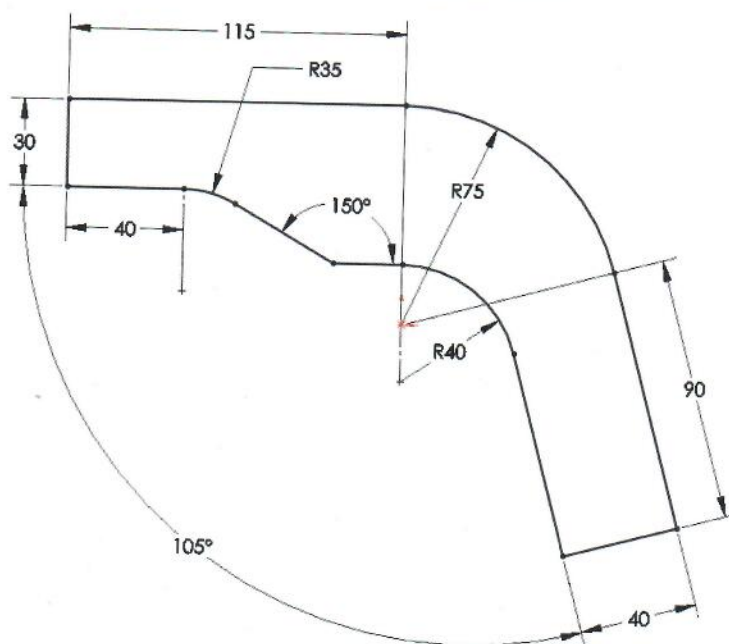
Create this part by following the steps as shown.

This lab uses the following skills:

- *Analyzing and Adding Draft* on page 245.
- *Shelling* on page 247.
- *Ribs* on page 250.
- *Full Round Fillets* on page 253.

**Optional
Sketching**

If you would like to use the existing geometry, skip to **Procedure**. If you would like to create the sketch, open a new **mm** part and use the dimensions below. The sketch is on the **Right Plane**.



Procedure

Open an existing part in the Exercises folder.

1 Open the part **Blow Dryer**.

Extrude, Draft and Rounds

Starting with the sketch, the base feature is created, drafted and rounded.

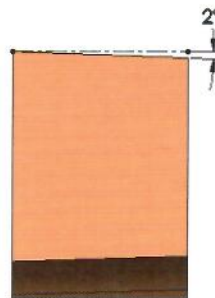
2 Extrude.

Extrude the sketch **25mm** as shown.



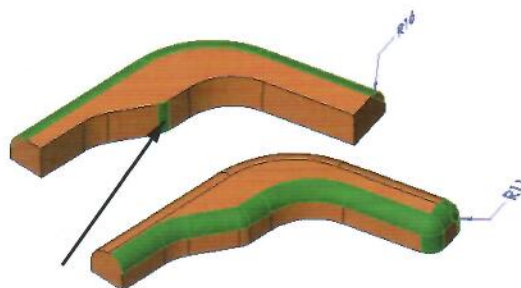
3 Draft.

Add draft of **2°** to all outer faces except the outlet face, using the back face of the model as the neutral plane. This is a partial Front view, looking *into* the outlet face.



4 Rounds.

Add rounds (**R16mm** and **R11mm**), using the size and sequence shown, to the solid body.



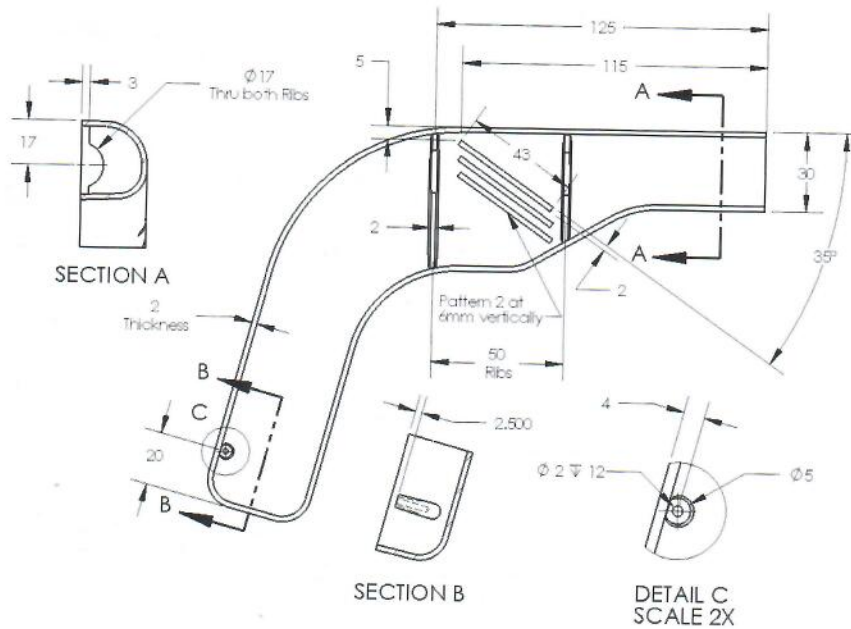
5 Check draft.

Using **Draft Analysis**, check the draft for **2°** against the Right Plane.

6 Complete the part.

Complete the part using the following guidelines.

- Wall thickness is constant.
- Vents and ribs are the same size.
- All bosses require a draft angle of 2° .
- All fillets and rounds **1mm** except full rounds on ribs.

**7 Save and close the part.**

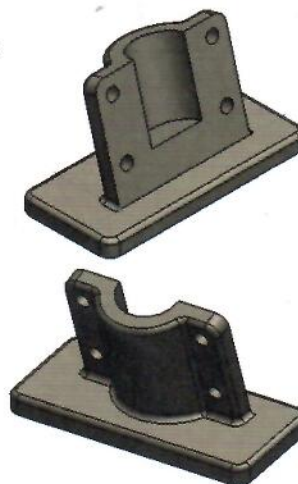
Exercise 33: Angles

Create this part using the dimensions provided. Use relations wisely to maintain the design intent.

This lab uses the following skills:

- *Converting Edges* on page 256.
- *Thin Features* on page 254.

Units: **millimeters**



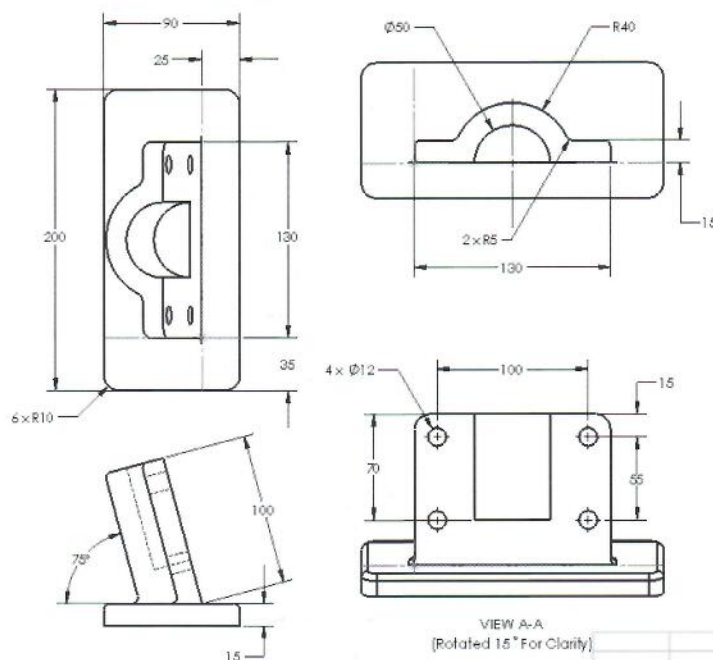
Design Intent

The design intent for this part is as follows:

1. Part is symmetrical.
2. All fillets and rounds are **1mm** unless noted.

Dimensioned Views

Use the following graphics with the design intent to create the part.



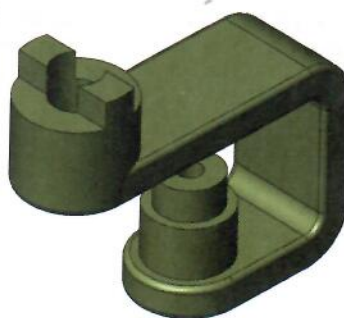
Exercise 34: Arm

Create this part using the dimensions provided. Use relations wisely to maintain the design intent.

This lab uses the following skills:

- *Converting Edges* on page 256.
- *Full Round Fillets* on page 253.
- *Thin Features* on page 254.

Units: millimeters



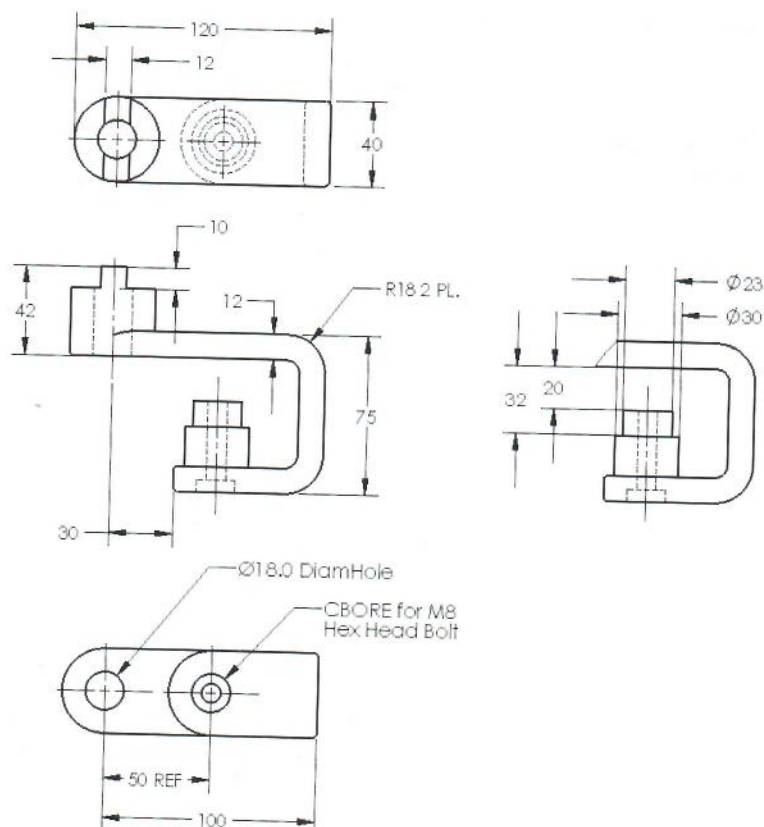
Design Intent

The design intent for this part is as follows:

1. Part is symmetrical.
2. All fillets and rounds are **2mm**.

Dimensioned Views

Use the following graphics with the design intent to create the part.



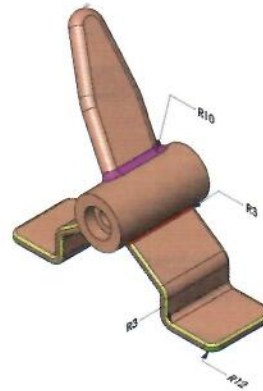
Exercise 35: Blade

Create this part using the information and dimensions provided.

This lab reinforces the following skills:

- *Full Round Fillets* on page 253.
- *Thin Features* on page 254.

Units: **millimeters**



Procedure

Create a new part. Refer to the image above for the sizes of fillets and rounds.

