ANSYS Forces in Permanent Magnets - Geometry

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Geometry

You will be prompted to either **Define new geometry**, **Import geometry file**, or **Connect to active CAD session**. Select **Import new geometry** and downloaded the file here. AIM will prompt again asking to select your calculation type, physics coupling and options. Under **Options**, check **Compute force** and then click **Finish**.
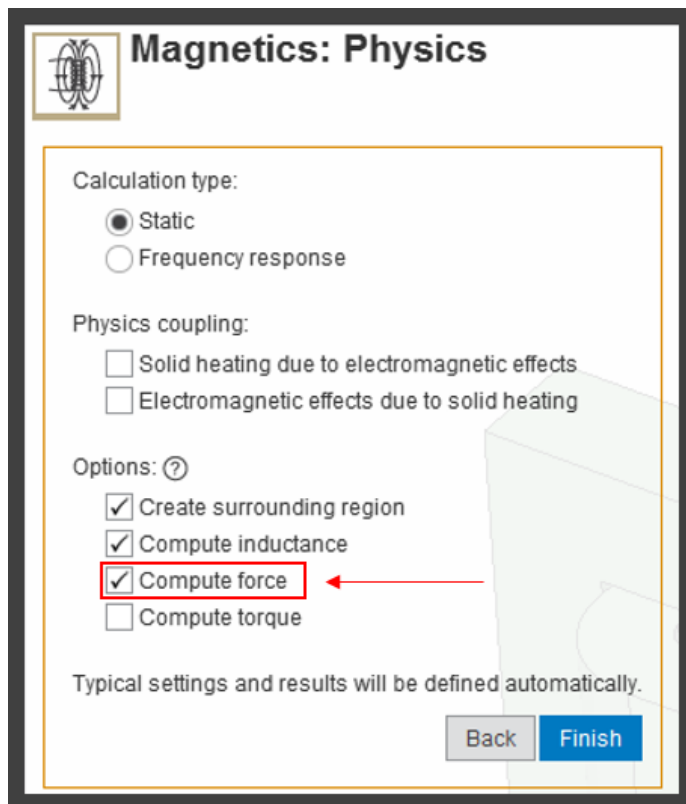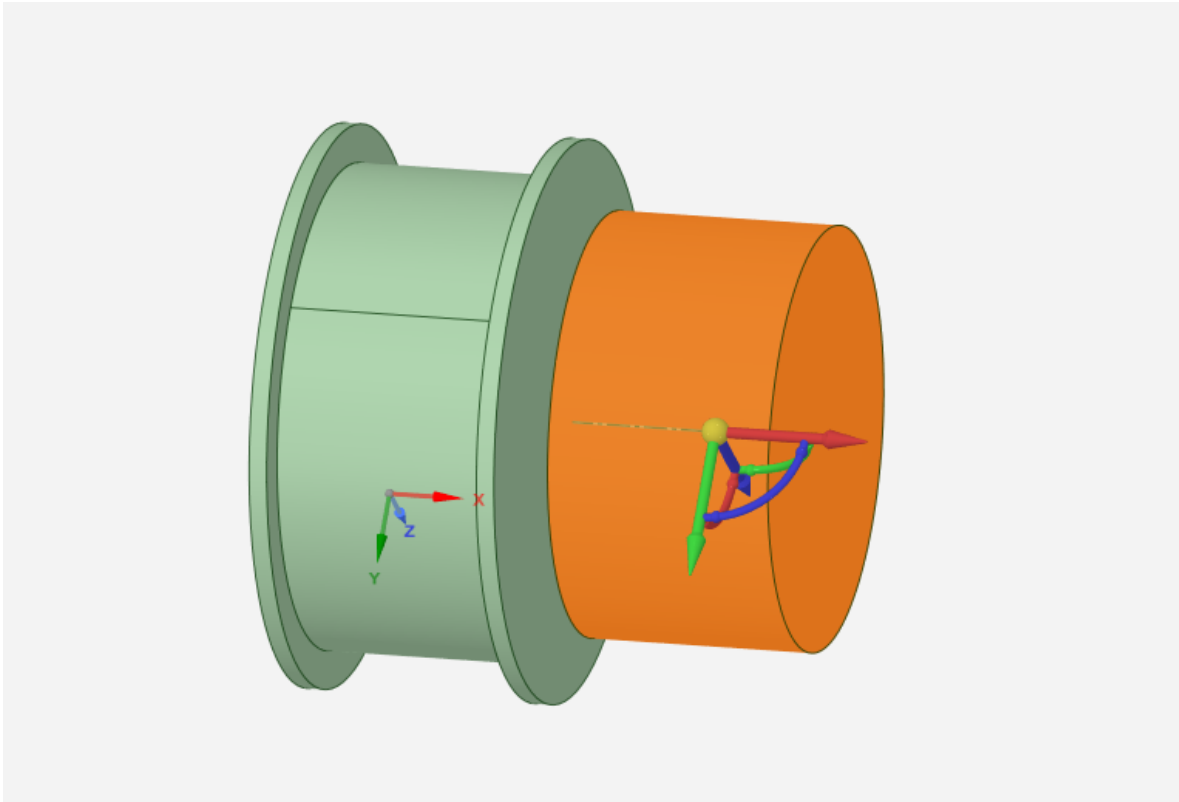

Creating geometric parameters

In order to vary the horizontal distance between the coil and magnet a parameter must be created. Once AIM has loaded click on **Geometry** > **Edit Geometry**. Hide the enclosure by deselecting the checkmark.
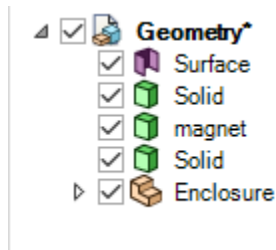

Triple click on the magnet to select the body. Select the **Move** tool and click on the origin.

Drag the origin onto the face of the magnet closest to the spool.
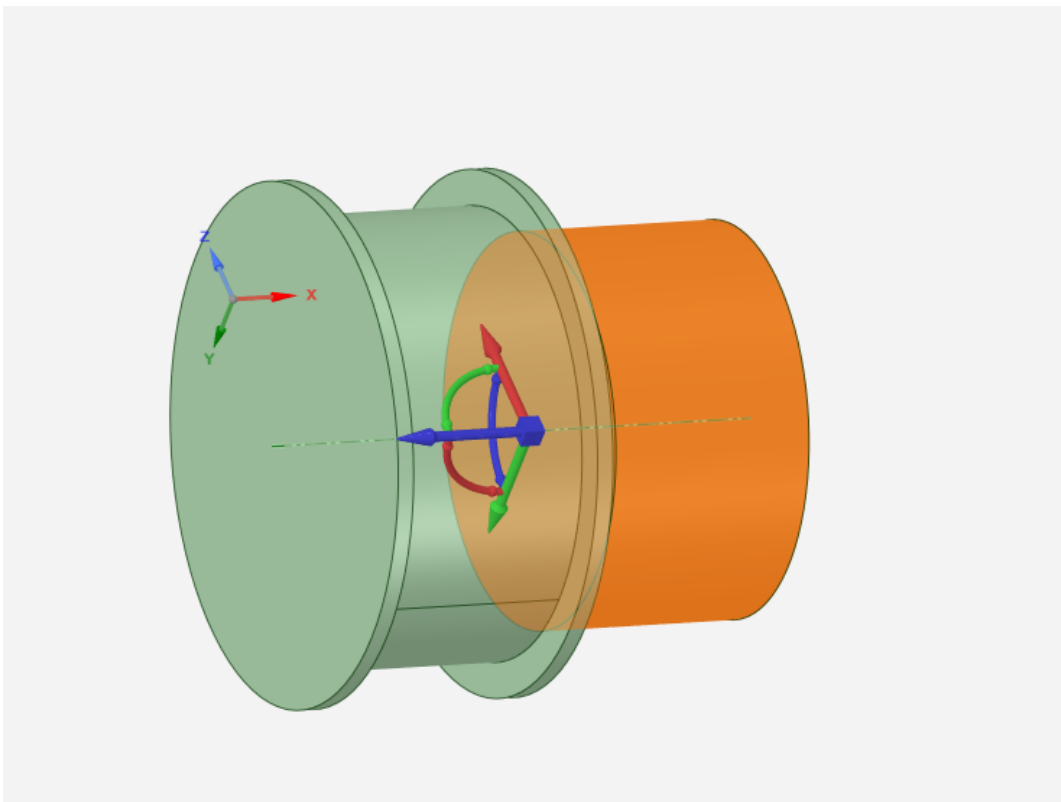
Once the origin turns into a square, select the blue axis of the **Move** tool. The other axis will be greyed out and in the **General** sidebar select the **Ruler** tool. The **Ruler** tool will then follow the cursor, at which point click the face of the spool closest to the inside the gap.
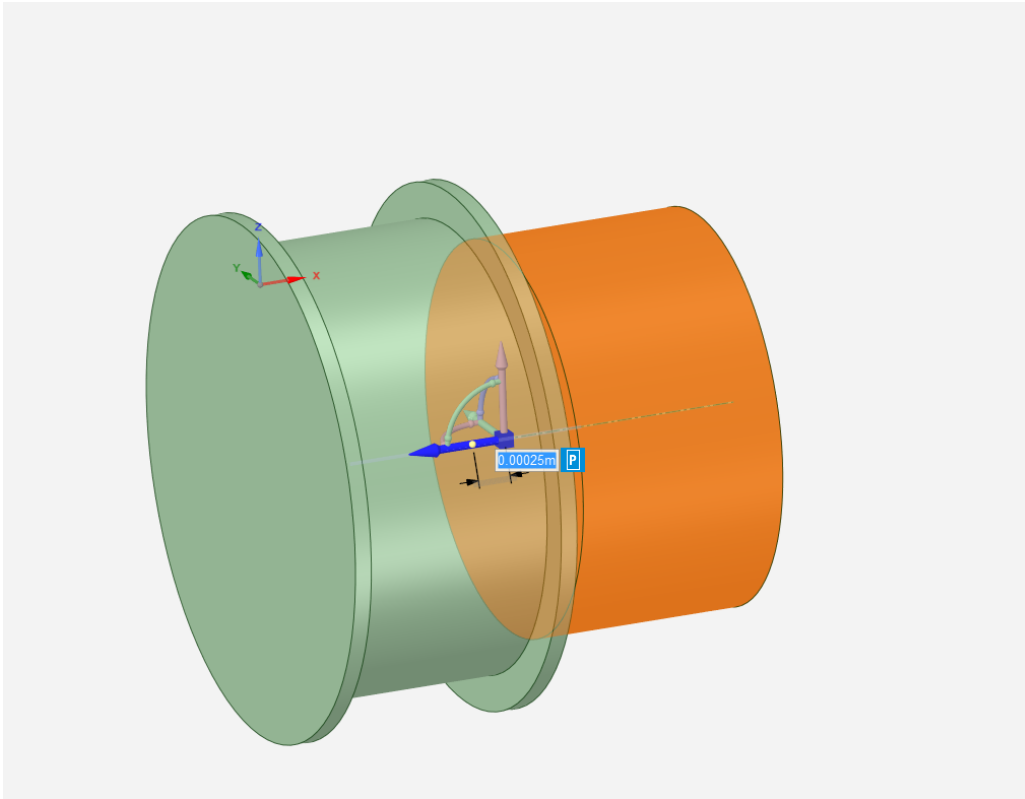
To create the parameter, click on the **P** next to the highlighted dimension box. Once the parameter is created, click the x in the top right corner to begin the physics set up.

Go to Step 3: Physics Setup

Go to all ANSYS AIM Learning Modules