

AIM Backwards Facing Step - Geometry

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Geometry

Select and open the appropriate file named [StepsSV](#). This file can be downloaded [here](#).

Once successfully imported, [press the blue Finish button](#).



Fluid Flow: Physics

Additional flow physics: ?

☐ Compressible flow (ideal gas)

☐ Thermal effects

☐ Swirling flow

Typical settings and results will be defined automatically.



Enclose

In order to create an area around the backwards facing step where air will move, an enclosure must be made around it to ensure that there is a volume which can be later meshed. Press **Geometry** in the workflow tab and select **Edit Geometry** in the **Geometry** template. The **Enclosure** tool can be found in the **Analysis** section of the toolbar under the **Prepare** tab. Select the step body and a box will appear around it to be edited. Uncheck the **Symmetric dimensions** box and change the height of the enclosure to be 0.2m, then change all other values to zero. Use the picture below for guidance. Press the green checkmark and the enclosure will be generated.

Suppress

Now that the geometry of the flow volume has been created, we can suppress the step from the physics calculation. Right click the solid in the geometry tree and select **Suppress for Physics**.

Go to Step 3: Mesh

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