FLUENT - Flow Past a Cylinder - Step 4

Set Up Problem in FLUENT

Launch FLUENT

Start > Programs > Fluent Inc > FLUENT 6.3.26

Select 2ddp from the list of options and click Run.

Import File

Main Menu > File > Read > Case...

Navigate to your working directory and select the cylinder.msh file. Click OK.

Analyze Grid

Grid > Info > Size

Check how many cells and nodes the mesh has.

Display > Grid

Display the grid information.

Define Properties

Define > Models > Solver...

Under the Solver box, select **Pressure Based**.

Click **OK**.

Define > Models > Viscous

Select **Laminar** under **Model**

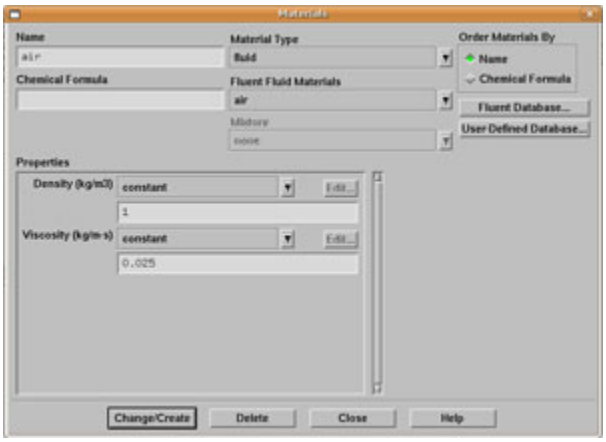
Click **OK**.

Define > Models > Energy

Do not select Energy Equation.

Define > Materials

Make sure air is selected under **Fluent Fluid Materials**. Set **Density** to constant and equal to 1 kg/m ^{3} and **Viscosity** to 0.025 kg/m-s. We choose these numbers so that Re = 40.



Click **Change/Create**.

Define > Operating Conditions

We'll work in terms of gauge pressures in this example. So set *Operating Pressure* to the ambient value of 101,325 Pa.

Click **OK**.

Define > Boundary Conditions

Set inlet, click **Set...** and set the **Velocity Magnitude** to 1 m/s. Click **OK**.

Set outlet, click **Set...** and set the **Gauge Pressure** at this boundary to 0. Click **OK**.

Go to Step 5: Solve.

See and rate the complete learning module.

Go to all FLUENT Learning Modules