

Unsteady Flow Past a Cylinder - Pre-Analysis & Start-Up

Authors: John Singleton and Rajesh Bhaskaran, Cornell University

[Problem Specification](#)

[1. Pre-Analysis & Start-Up](#)

[2. Geometry](#)

[3. Mesh](#)

[4. Physics Setup](#)

[5. Numerical Solution](#)

[6. Numerical Results](#)

[7. Verification & Validation](#)

[Exercises](#)

[Comments](#)

Pre-Analysis & Start-Up

Please complete the "Steady Flow past a Cylinder tutorial before completing this tutorial. Click [here](#) to go to the problem statement of the "Steady Flow Past a Cylinder" tutorial.

Alternatively, click [here](#) to download the completed project files for the "Steady Flow Past a Cylinder" tutorial.

The pre-analysis is the same for both steady and unsteady flow past a cylinder. Click [here](#) to go to the pre-analysis of the "Steady Flow Past a Cylinder" tutorial.

To start-up, open your completed "Steady Flow Past a Cylinder" project file. (If using the completed version in the zip file above, extract the files and open "Cylinder.wbpj".)

Right-click on **Fluid Flow (FLUENT)** and then click **Duplicate**. Enter "Unsteady Flow" in the highlighted field to rename it. Your Project Schematic should now appear as below.

A			
1	Fluid Flow (FLUENT)		
2	Geometry	✓	
3	Mesh	✓	
4	Setup	✓	
5	Solution	✓	
6	Results	✓	

Steady Flow

B			
1	Fluid Flow (FLUENT)		
2	Geometry	✓	
3	Mesh	✓	
4	Setup	✓	
5	Solution	⚡	
6	Results	?	

Unsteady Flow

[Go to Step 2: Geometry](#)

[Go to all FLUENT Learning Modules](#)