Transition Duct - Physics Set-Up

Author(s): Sebastian Vecchi, ANSYS Inc.

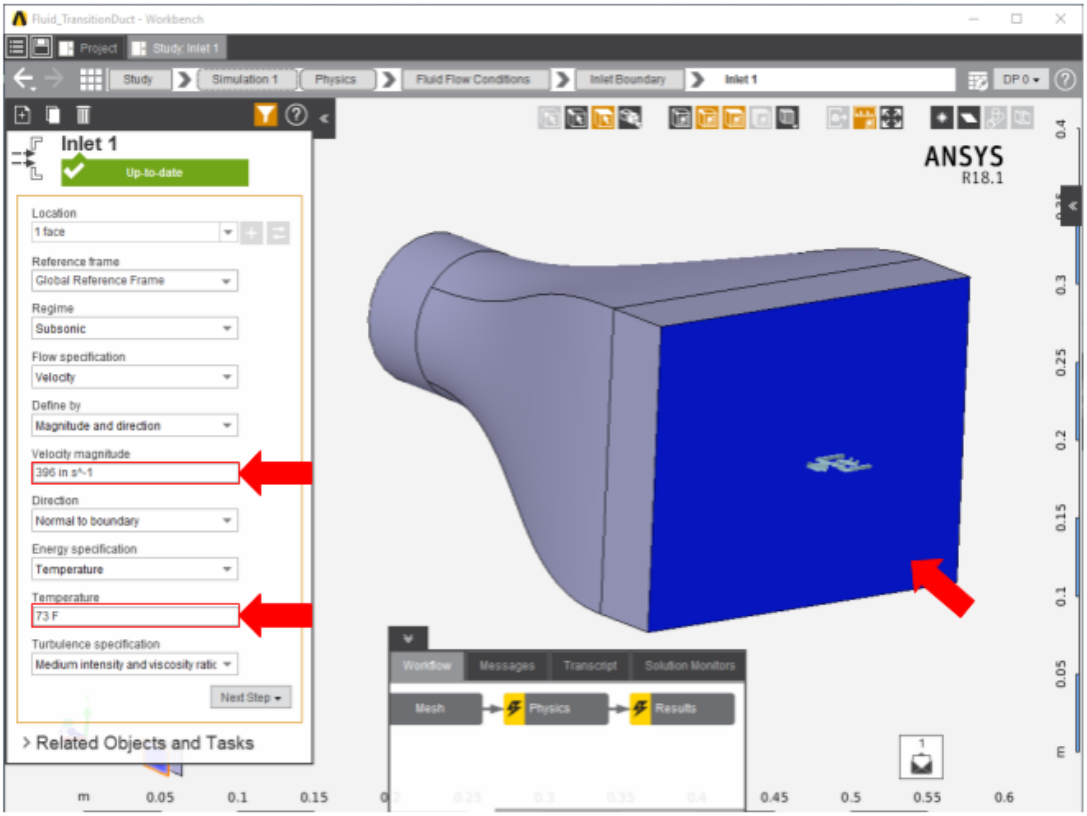
Problem Specification
1. Start-Up
2. Geometry
3. Mesh
4. Physics Setup
5. Results

Physics Set-Up

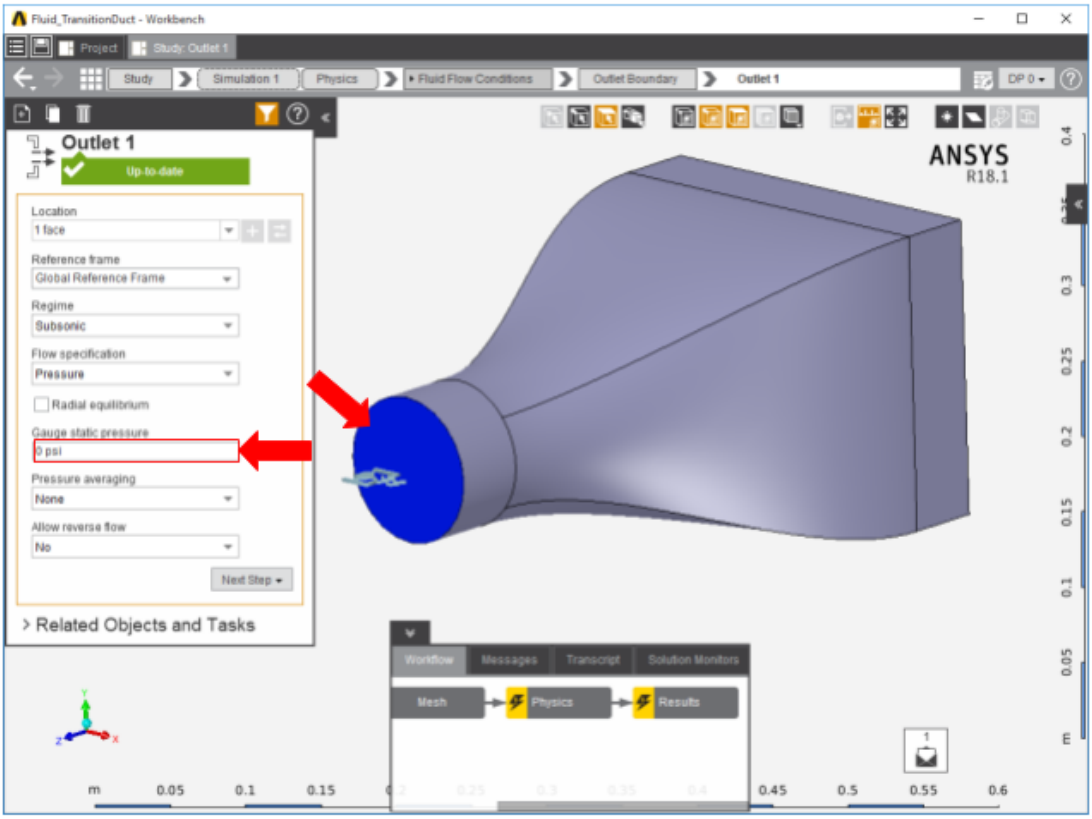
Select the **Physics** task in the **Workflow**.

Boundary Conditions / Forces

First, the inlet must be defined using the **Fluid Flow Conditions**. In the **Add** drop down menu by **Fluid Flow Conditions**, select **Inlet**. Then, using the face selection tool, define an inlet at the wide end of the duct. Input the **Velocity magnitude** as 33 [ft s^-1] and a **Temperature** of 73 degrees [F]. When entering the **Velocity magnitude**, be sure to enter the units correctly. After entering the value in “ft s^-1”, it will be automatically converted to the default units of “in s^-1” and displayed accordingly.



Once the inlet is defined, the outlet is next. In the same **Add** menu, define an **Outlet** at the small end of the duct. Assign a **Gauge static pressure** of 0 psi.



Next, a **Wall** condition must be added to all surfaces that are not already defined. **Wall** can be found in the same **Add** menu as the previous conditions. By default, the wall condition is thermally insulated. AIM will automatically create the Wall once the option is selected, automatically selecting every face that doesn't already have a constraint on it.

Go to Step 5: Results

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