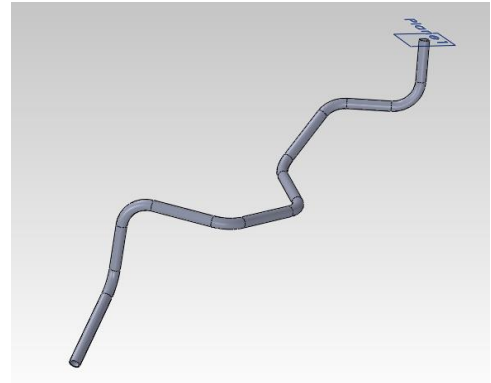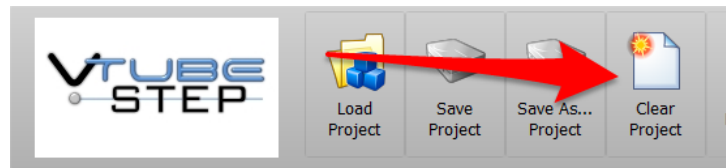**This guide shows how to perform a basic import of a simple STEP file (the demo 3 part) and then export the data to a bender using the Supravision Network Ethernet protocol. The steps in this workflow are from version 2.2.**

## Start VTube-STEP, then follow these steps:

1. Press the Clear Project button in the tool bar on the top of the VTube-STEP window.
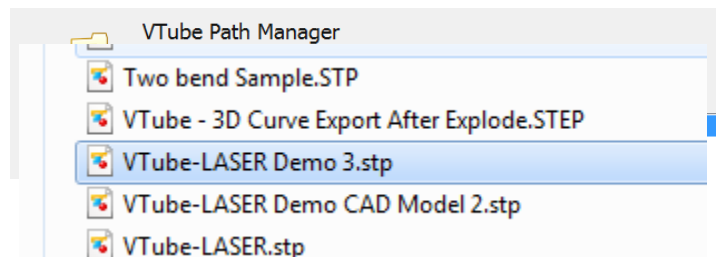


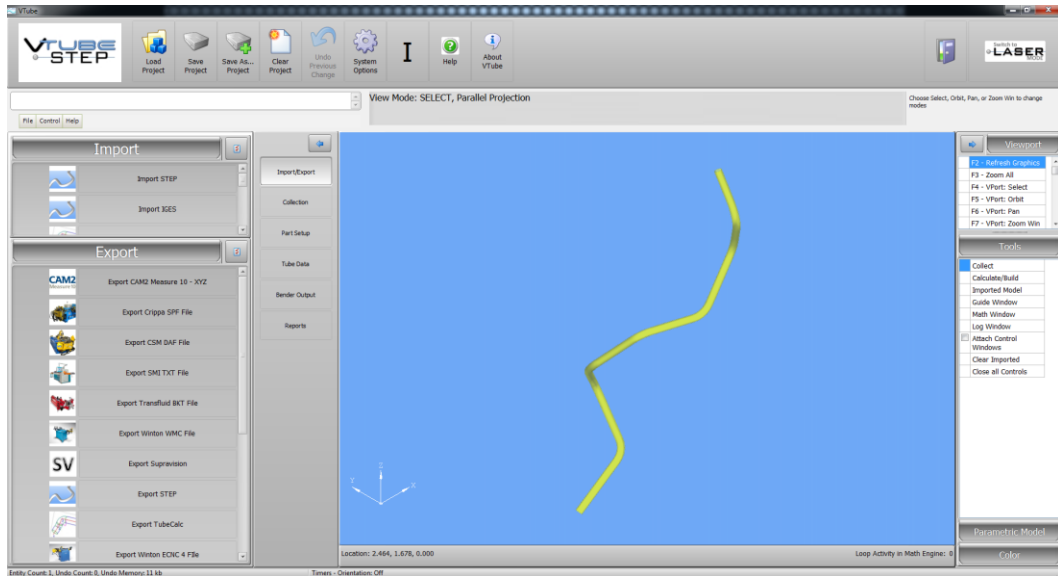2. Press the Import/Export button in the Navigation Pane, then press the Import STEP button in the Import menu.



3. Double click on the VTube path in the Path Manager.

   Find **VTube-LASER Demo 3.stp** file and load it into VTube-STEP.

4. The screen will appear something like this:



5. Press the Collect button on the right side of the screen.

6. Check on both the checkboxes in the Straight from Cylinder SURFACE option.

7. Press **"Add a Cylinder Surface to the Collection"** button.

   Note that with the **"Keep adding more surfaces"** option enabled, VTube will continue to press the "Add Cylinder the Collection" button automatically after straight surface selection.

Surface to every



2
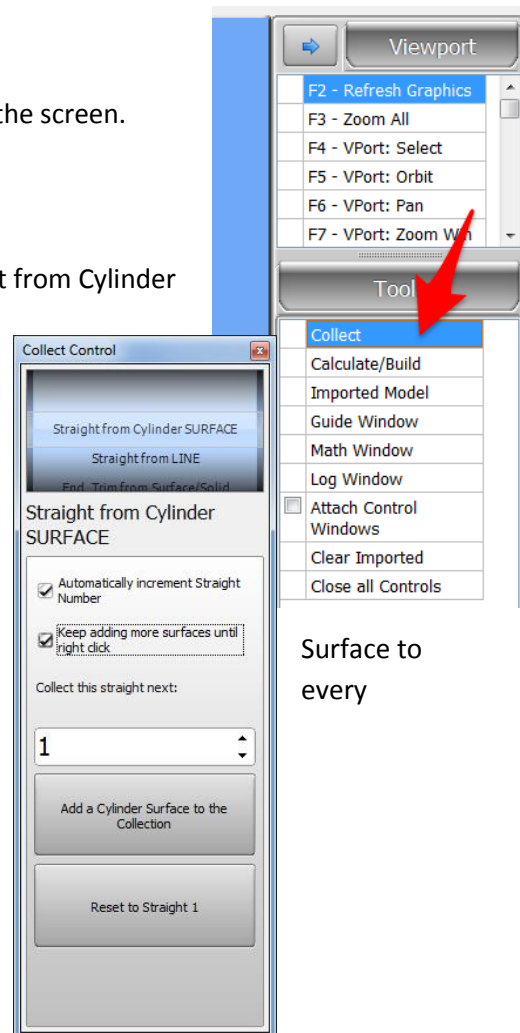
8. Select the surfaces of the tube straights in order. We recommend that you choose the shorter of the two end straights as the first straight.

Follow the instructions in the yellow guide box.
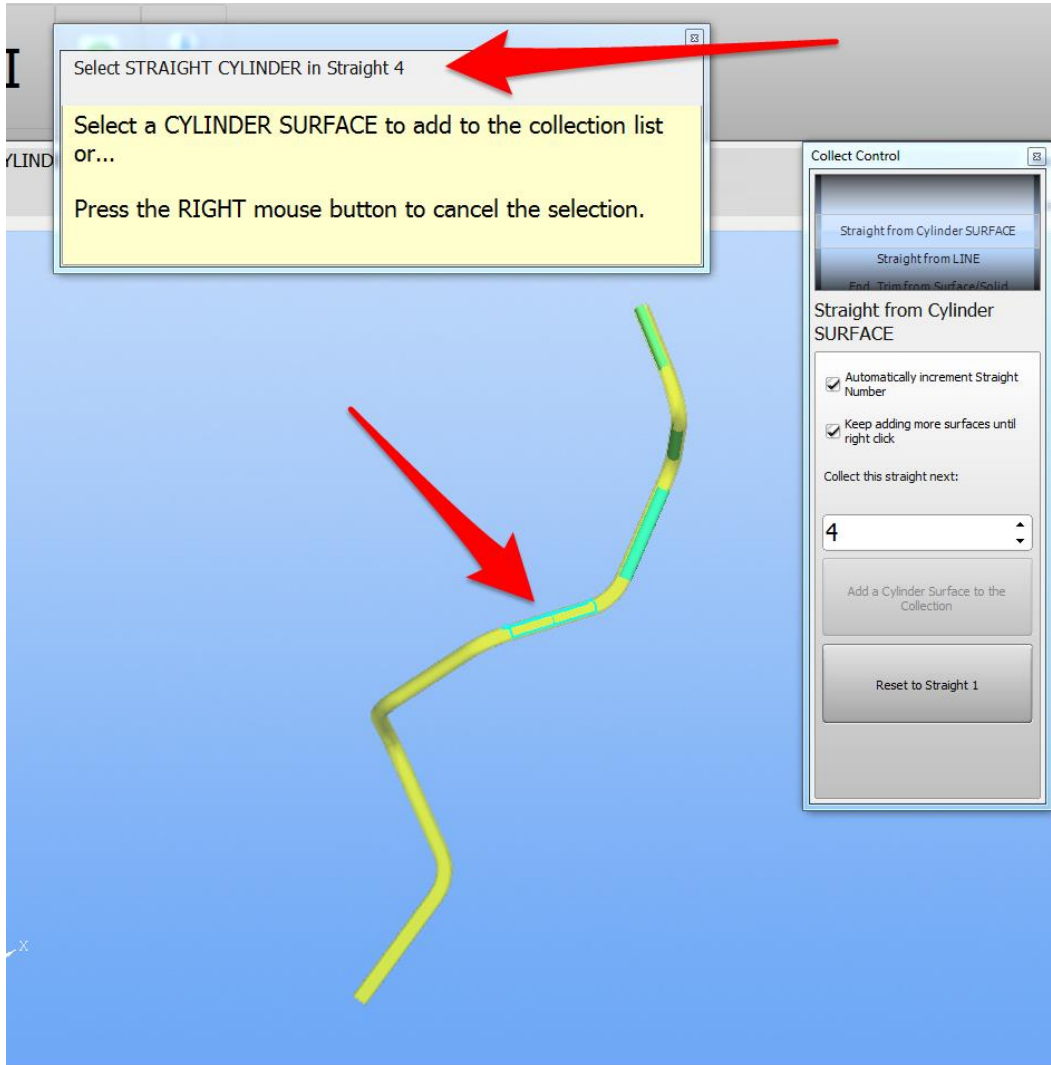
9. It is acceptable to collect both outer diameter surfaces, and inner wall surfaces in any straight. If you collect a variety of both, then VTube will calculate the wall thickness as well as the diameter.

   When you have selected all the straights, VTube will continue to ask for straight 9. There is no straight 9 in this part, so stop the collection process by RIGHT clicking the mouse on the viewport.
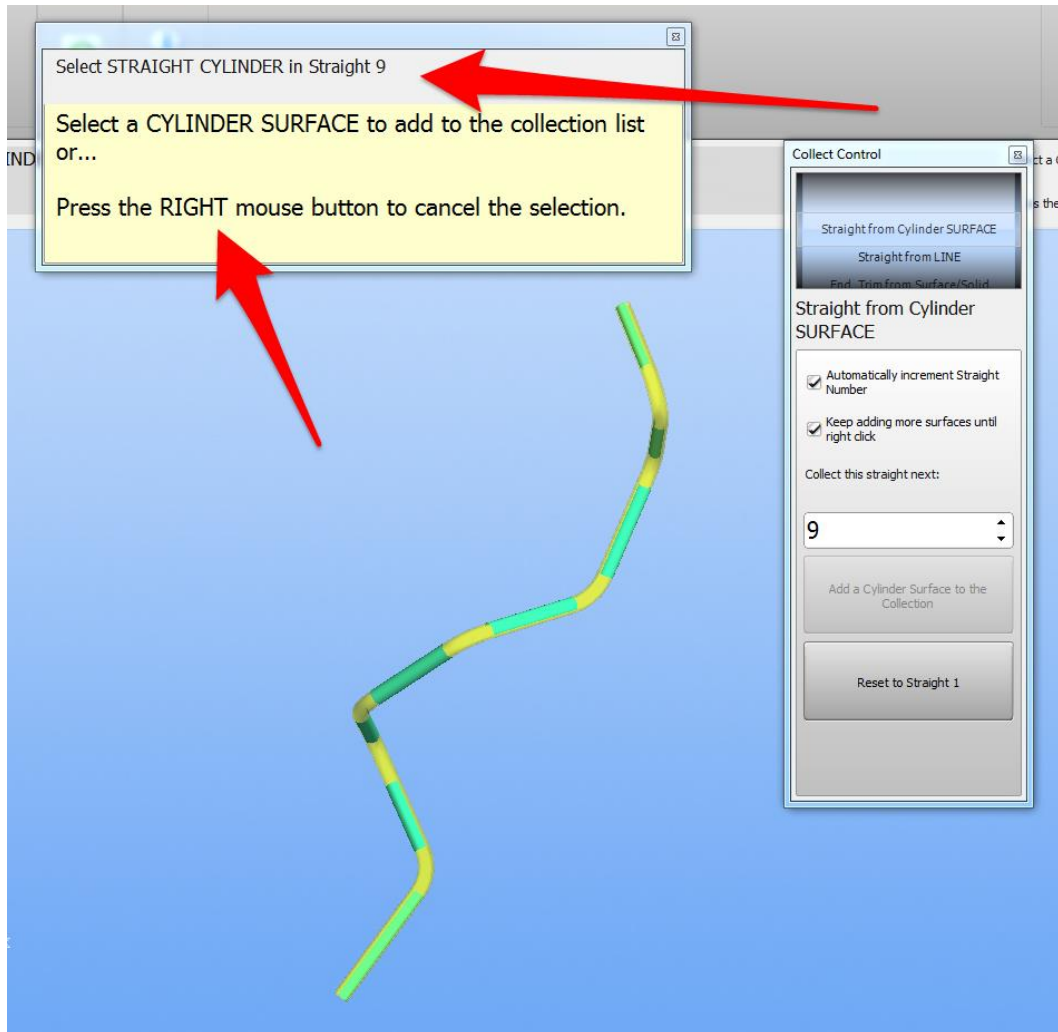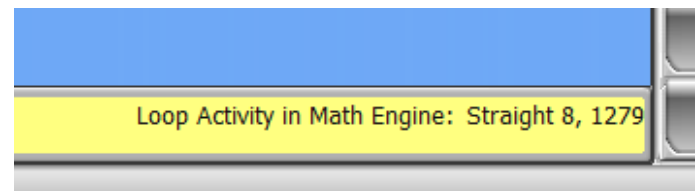


10. The CAD mouse mode will change to SELECT mode – which means that the process of adding to the collection is stopped.



4
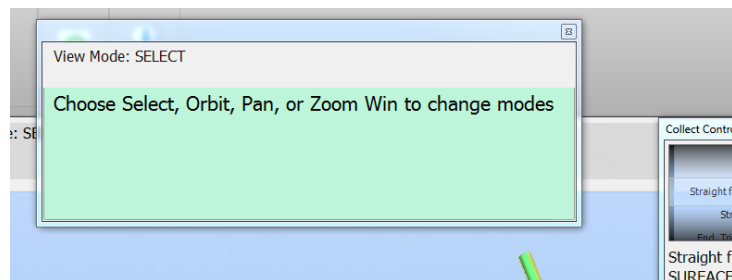
11. Right click on the viewport again, then click on **"Generate Tube Model from Collected"**.
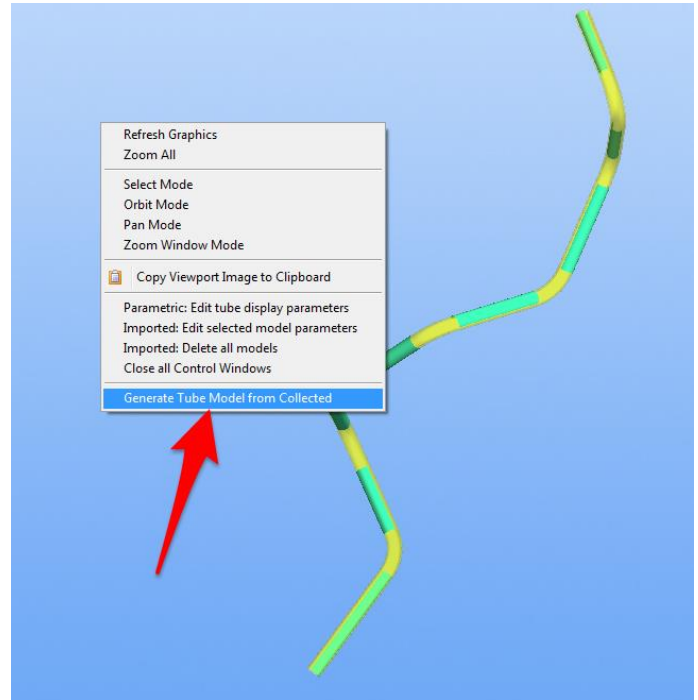


12. In the lower right corner of the viewport, you will see the math engine work its way through the straights in order to solve for the centerline.

13. When the calculation is complete, you will see new XYZ data in the Tube Data menu. You will also see a white tube superimpose on the imported model.
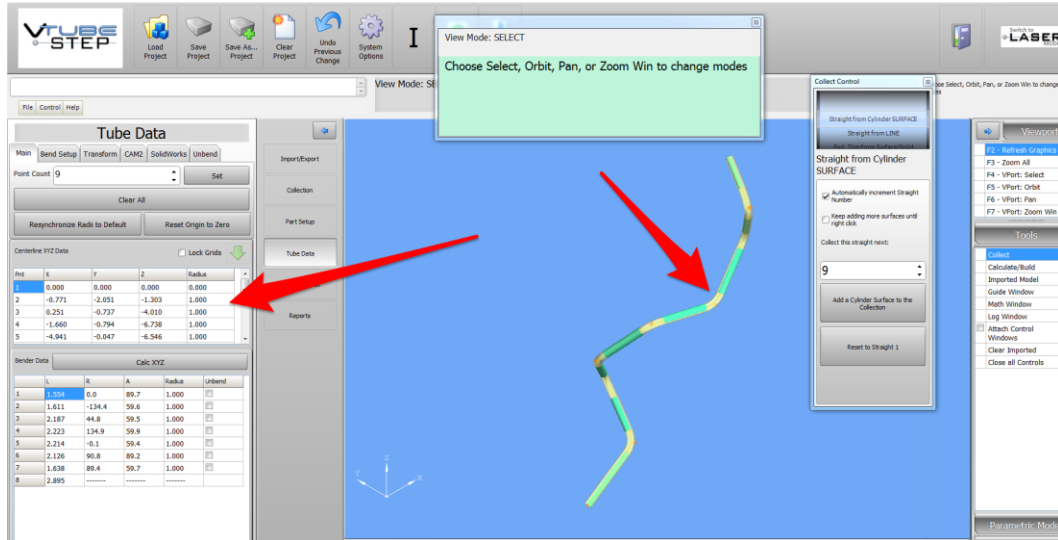


14. During the calculation, VTube also calculated the diameter, the wall thickness (if you selected an inner wall in the collection), and calculated the cut length.

    All of these values can be seen in the Part Setup menu. So, click on the Part Setup menu in the navigation pane, and show the diameter, wall (if non-zero), and the cut length.



15. Scroll to the bottom of the Part Setup menu. At row 31, enter a tube elongation percentage of "4" and press enter. This is a typical elongation percentage in the tube fabrication industry.

16. Right click on the Part Setup menu, and click on Calculate Cut Length. The cut length will change from 24.775 to 24.442. This would be a value closer to the actual cut length of the tube based on expected elongation in the bends.
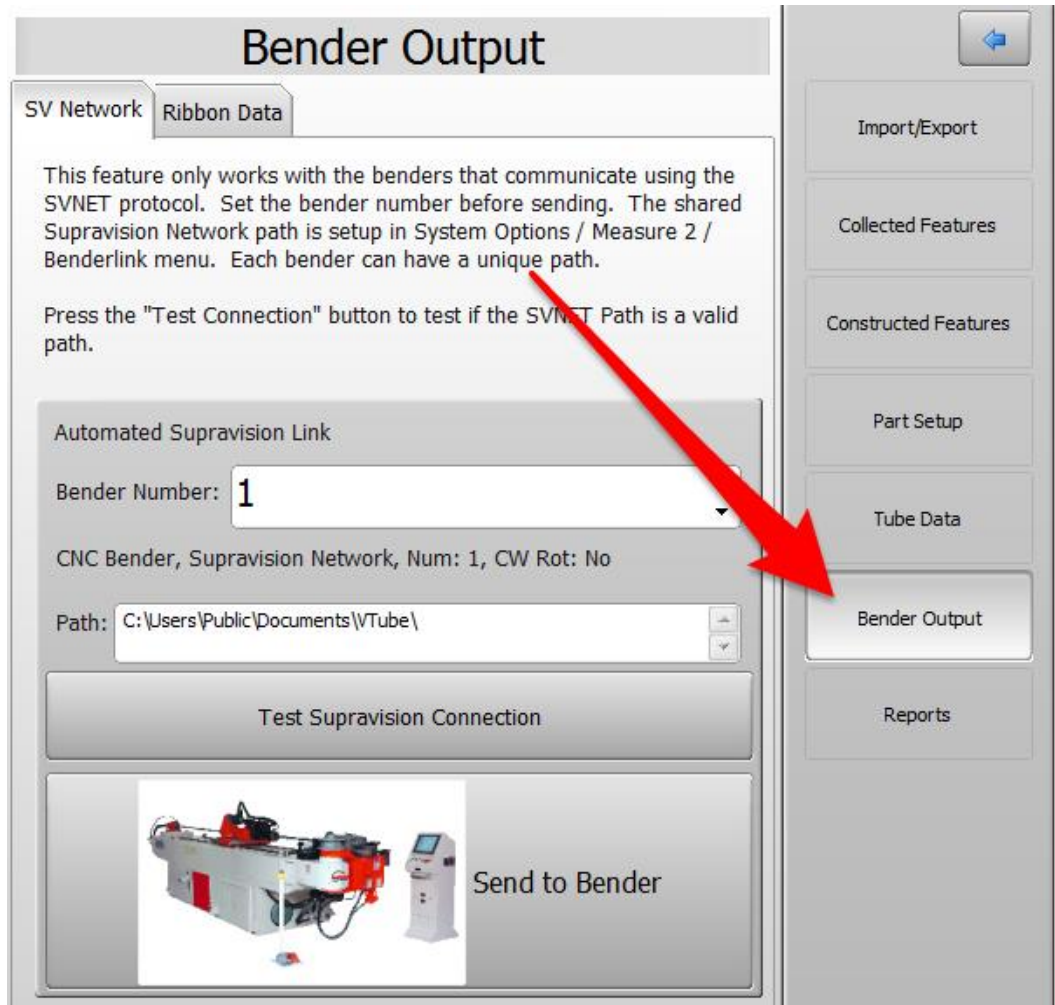
17. Now we can export the data the bender.

    This training document assumes that the bender is communicating with the Supravision Network protocol. This protocol connects through standard networking to share data automatically through file sharing.

    Press the Bender Output button in the Navigation Pane like this:



18. The standard setup will show a folder that is already setup for bender 1. VTube can communicate with up to 100 benders. The Bender Number box shows bender "1" by default. You can choose any of the 100 benders by press the up and down arrow keys in the Bender Number box, or just enter a value from 1 to 100.

    This standard folder setup works fine for demonstration. It usually has to be changed to work with a bender. (It is changed in the System Options > Measure 2 Tab > Setup Benderlink network menu.)

19. Press the "Test Supravision Connection" to show that VTube can check for a good network connection to the bender. In this case, the location is in the public folder of your local hard drive – so it should pass without a problem.
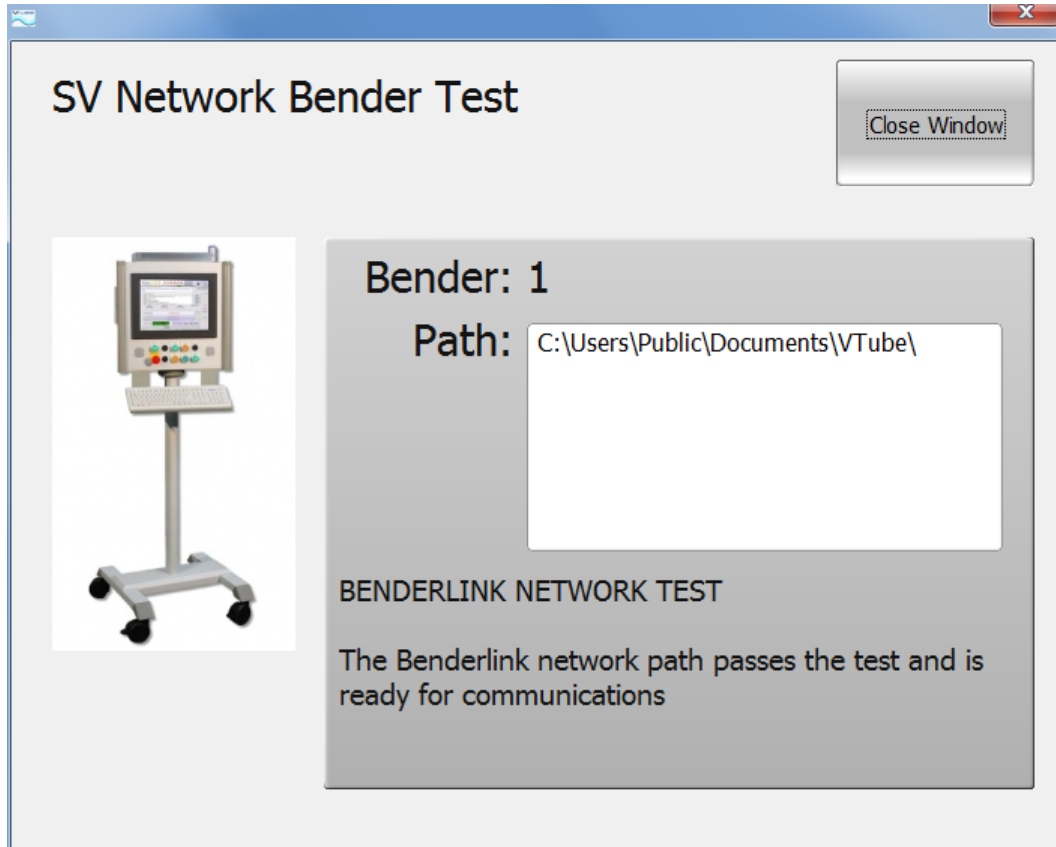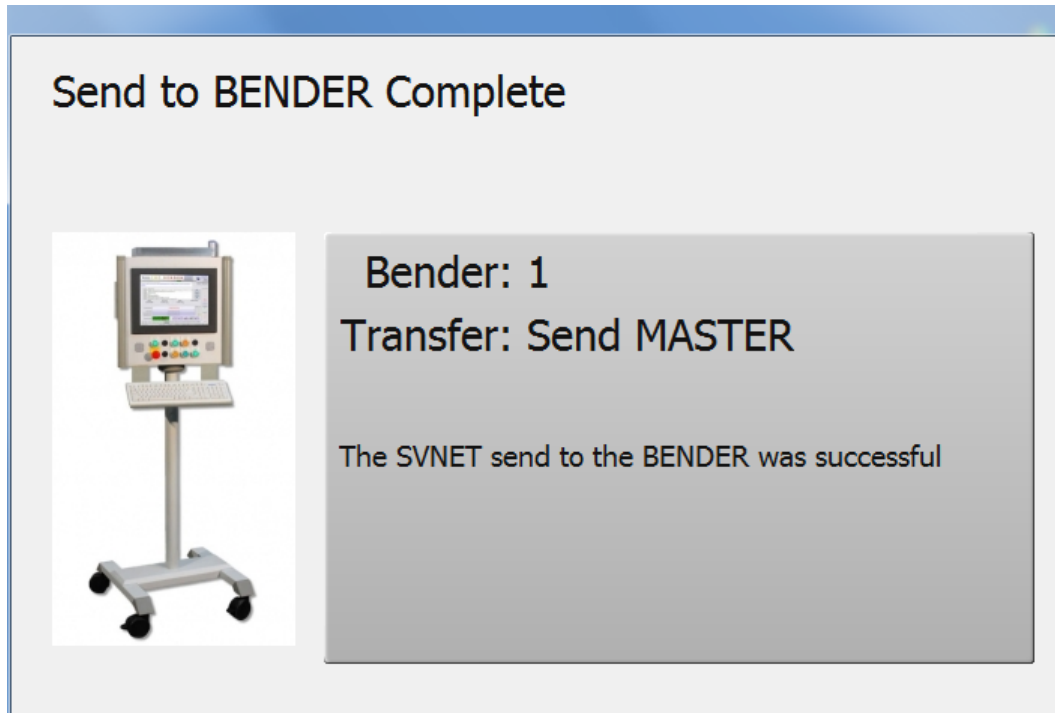


Press the Close Window button.

20. Press the **Send to Bender** button to send the data to the bender you've selected.

    The data will now be saved to the location that is shared between VTube and the bender. When the save is complete, VTube shows this window:

    

21. Move over the bender and finish the import of the data. Every bender handles importing this data slightly differently. In every case, it will be important to setup your bender control to be watching the same path that is programmed into VTube-STEP for this protocol to work.

    Also, both VTube and the bender will have to agree on each bender NUMBER to use. The bender number can be changed in VTube in the **Setup Benderlink network** menu.

    We have an extensive web knowledgebase that covers setup for different benders. Please ask us about specific types of benders for setup instructions for details on how to setup bender controls to work with the Supravision Network protocol.

This is the end of the introductory VTube-STEP demonstration training guide.

To learn more in depth import techniques, please visit the **VTube-STEP Video page** in our web knowledgebase:

http://www.advancedtubular.wiki/index.php/VTube-STEP_Videos

Example videos:

Video 23: Super-Fast Model Data to Bender Communication
Video 22: How to Import a Rectangular Tube Model
Video 21: Sending a SOLIDWORKS tube a bender in 60 seconds
Video 20: Unbending
Video 19: Data Input Types
Video 18: General Demo
Video 17: Springback Compensation Tutorial
Video 12: Automatically building a SolidWorks tube from VTube