

**W5B: CIM [NOTES] 3.2.2 Pneumatic Set Up Video (VEX V5)****Introduction**

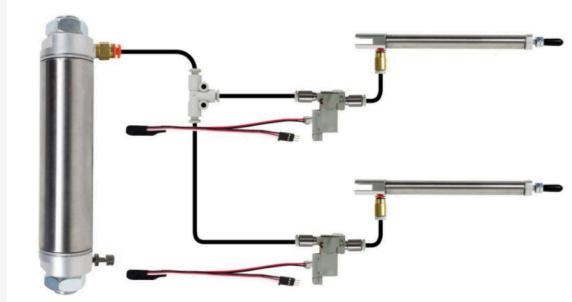
You are the manager of an engineering firm that has been hired by a local rim manufacturer. The rim manufacturer would like to reduce injuries associated with the manual feed of parts into a milling machine. In this project, you will design, build, test, and present a system that will eliminate the problem with automation. You must use **Pneumatic power** for at least one movement.

**Equipment**

Computer with VEXCode V5 software access  
VEX® components (dependent on your design)

**Procedure**

Take detailed notes on the worksheet below. Make sure to take screenshots to explain your work.



The Pneumatics Kit 1 - Single Acting Cylinders contains all of the components necessary to create a complete system to control two single acting pneumatic cylinders.

View the following video and take detailed notes on how to set up the Pneumatic system. You should take screenshots and explain the process.

[https://www.youtube.com/watch?v=bBb4i6W1bwk&ab\\_channel=JohnFuller](https://www.youtube.com/watch?v=bBb4i6W1bwk&ab_channel=JohnFuller)

- Do not bring your Vex microcontroller or the entire robot to the filling station. This prevents accidental drops or damage to expensive electronics.
- Before filling, ensure the check valve on the reservoir is in the correct position (closed/open as needed for the specific setup) so air doesn't leak out immediately.
- You can fill the reservoir to around 80 PSI (though the tanks are rated for 250 PSI, 80 PSI is the recommended working pressure for our projects)
- Watch the pressure gauge (often a pop-out style on the air chuck or a standalone dial).
- Stop once you hit the 80 PSI mark to ensure you have enough power for your pneumatic cylinders without over-stressing the components.

Include a screenshot of the code needed to operate the Pneumatic Device. Ensure that your name is included on the VEX V5 Code. Write the code on the VEX V5 Software and include your name in the code.

VEXCode V5 Screenshot of the code

[https://www.youtube.com/watch?v=dohqELZJ94o&ab\\_channel=MuradMalik-393B](https://www.youtube.com/watch?v=dohqELZJ94o&ab_channel=MuradMalik-393B)



<https://youtu.be/7hYjRFp9h7o?si=v8q4V83mYD31IHLA>

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Period 2