

Compilation

1. Start from the previous exercise where you built the prototype
 2. Did all the parts go together?
 - a. If not, you will need to modify the model so that all the parts fit together
 - b. A problem can arise if you have to insert a piece into a closed part -> it will be necessary to split the part into several parts and figure out how to connect them
 3. Do all the parts fit together nicely?
 - a. If some parts are too tight, increase the clearance between the elements
 - b. If the parts are too loose, reduce the clearance between the elements
 4. Are suitable magnets selected?
 - a. If the magnets don't hold the parts together -> modify the parts for more giant magnets (there must be enough space to place them)
 - b. If the magnets hold the parts together too tightly -> modify the parts for a smaller magnet
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Practicality

1. Try manipulating the prototype.
 - a. The prototype must hold well and be easy to handle
 - b. The prototype should stand stably on the mat
 - c. If something is not correct, adjust the design of the external parts or the weight of the prototype
 - d. Hand-held parts should be of appropriate size
 2. Check the strength of the walls.
 - a. Excessively thick walls increase production costs
 - b. Too narrow walls can cause instability of the prototype
 - c. Adjust the strength of the walls
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Functionality

1. Verify that the prototype has sufficient force to force the fluid out of the syringe.
 - a. If the prototype does not have enough power, you will need to identify the problem
 - b. The problem may be in the material and the resulting friction
 - c. Another problem can arise with the size of the parts and the number of threads in the threaded rod
 - d. It is also necessary to think about whether this design is suitable at all
 2. Is the threaded rod with the appropriate number of threads selected?
 - a. If the step is too fine, you will spin for a long time before the change even occurs
 - b. If the step is too significant, you will not achieve a sufficiently fine step of fluid displacement
 - c. Design a suitable threaded rod and modify the parts that fix it in the prototype
 3. Did you find any other shortcomings?
 - a. Suggest a modification
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