

## Helium Rig Instruction

This rig will allow the user to fill large neck balloons from standard helium tanks. You should be able to assemble it in less than 1 hour with minimal tools. I recommend reading the process through before you begin and checking your own inventory before going out and buying the parts.

### Parts List:

Quantity	Description
1	1" x 5' PVC Pipe
1	1" PVC Slip Coupling
1	1" x 3/4" PVC Bushing (Slip x Thread)
1	3/4" MIP x 1/2" FIP Brass Pipe Hex Bushing
1	1/2" MIP Brass Pipe Hex Nipple
1	1/2" FIP x 1/4" FIP Brass Pipe Reducing Coupler
2	3/8" Barb x 1/4" MIP Brass Hose Barb Adapter
2	1/2" Steel Hose Clamps
1	Teflon Tape
8 ft	3/8" ID High Air Hose
1 can	PVC Cleaner
1 can	PVC Glue
1	Helium Regulator

All parts can be purchased from Lowes or any other hardware store from the plumbing section. Your price might vary depending on the location but you should be able to get everything for under \$30.00 except for the regulator.

The regulator is a personal choice and there are many kinds on the market. I use a regulator that does not have a pressure gauge which cost around \$30.00. The regulator with the pressure gage shown to the right will cost around \$35.00. They can be found at welding stores, balloon outlets, or online.

Usually your helium dealer has balloon regulators that they will loan you with the tank which you can use instead of buying one. You just unscrew the black balloon valve from the regulator; attach your rig to the regulator. When you are ready to return the tank just detach your rig and replace it the black balloon valve before returning your tank.

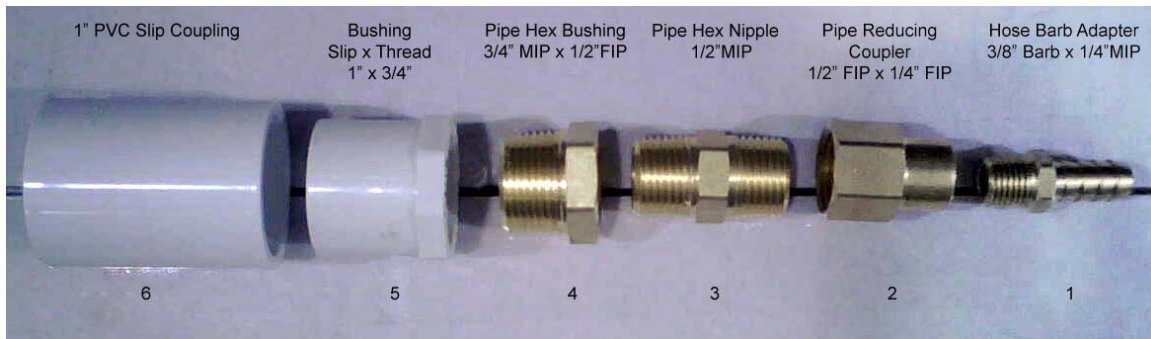
### Tools:

- 2 Adjustable Wrenches,
- 1 Screwdriver (Flat or Phillips, depends on the type of hose clamps)
- 1 small saw or PVC pipe cutter
- Paper towels



## Instructions:

1. Start by laying out all the parts as shown. This is how the pieces will fit together when you are done.



2. Wrap the threaded parts of items 1, 3, and 4 with Teflon tape.
3. Screw together items 1 through 5 and tighten.
4. Clean the outside of item 5 and the inside of item 6 with PVC cleaner.
5. Apply some PVC glue to the outside of item 5 and the inside of item 6 and slip them tightly together. Wipe off any excess glue with a paper towel.
6. Cutout a 7" section of 1" PVC pipe.
7. Clean the inside and outside edge of one end with PVC cleaner.
8. Clean the inside edge of item 6 with PVC cleaner.
9. Apply PVC glue to the inside of item 6 and the outside of your 1" pipe.
10. Slip the pipe inside item 6 tightly. Wipe off any excess glue with a paper towel.
11. Slip a hose clamp over one end of your air hose and attach the hose to the barbed end of item 1.
12. Secure the hose clamp.

When you are done it should look similar to the image below.



13. Slip the second hose clamp over the open end of the air hose.
14. Slip the hose over the barbed end of the second Hose Barb Adapter.
15. Secure the hose clamp.

If you purchased a regulator continue on to step 16, otherwise you are done.

16. Wrap Teflon tape over the threaded end of the Hose Barb Adapter.
17. Screw on the regulator and secure tightly with wrenches.

Congratulations – You are finished.

The final assembly should look similar to the one below.



If you did not purchase a regulator and are planning to use the balloon regulator from the helium supplier you should carry Teflon tape in your balloon kit. When you are ready to fill the balloon you just unscrew the rubber balloon tip from the regulator and follow steps 16 and 17 above. When you are ready to return the tank and regulator to the dealer just unscrew your rig and replace the tip on the regulator.