

# HalloweenAddiction.com How-to

## PVC Cylinder

Materials:	PVC Pipes - Schedule 40			
	Nominal Pipe Size (inches)	Outside Diameter (inches)	Minimum Wall Thickness (inches)	Nominal Inside Diameter (inches)
• ~2' of 1" (inside diameter) electrical Schedule 40 PVC (Gray) (Size cylinder length to desire movement)	1/2	0.840	0.109	0.622
• ~2' of ½" (inside diameter) PVC (size piston to amount you want sticking out of cylinder when closed)	3/4	1.050	0.113	0.824
• 1 – ½" PVC Cap (Slip) (End of Piston)	1	1.315	0.133	1.049
• 1 – 1" PVC Cap (Slip) (End of Cylinder)	1 1/4	1.660	0.140	1.380
• 1 – 1" to ½" threaded 90 degree reducing elbow (End of Cylinder to air hose fitting)	1 1/2	1.900	0.145	1.610
• 1 – ½" brass / plastic hose fitting (barbed in will vary based upon the air hose you are using in your haunt)				
• PVC Primer and Cement				

### Instructions:

- 1) Cut your Cylinder (1" gray PVC) to the desired length of the action you wish to occur (you may want to add an inch).
- 2) Sand the inside of one end of the Cylinder to ensure no sharp edges that the end of the Piston may catch on. Cement the 90 elbow on to this end of the Cylinder.
- 3) Cut the Piston (½" PVC) to the desired length (length of Cylinder above + what you want extending outside of it to attach your prop).
- 4) Cement the ½" Cap to one end of the Piston.
- 5) As the cap is too large to fit inside the Cylinder, you need to use a belt sander to sand it down to a diameter just smaller than the inside of the 1" PVC... do this while constantly turning the piston in circles to sanding to avoid flat spots on the cap...



- 6) When the Piston slides easily in and out of the Cylinder, you're done. (You may want to make the top and bottom of the cap a little thinner than the middle so it doesn't catch on any interior parts).
- 7) Optional: Drill a pilot hole, and insert a screw into the end of the Piston Cap, leave sticking out 3/4", this is to prevent the piston from dropping too low inside the elbow and catching on the end of the 1" PVC Cylinder.
- 8) Drill a 7/8" hole into the center of the end of the 1" Cap, sand it smooth.
- 9) Pre-fit your Piston into the Cylinder, then place 1" Cap over the Piston (fitting it through the hold) and slide it down to the end of the Cylinder. Ensure that the Piston slides smoothly up and down inside Cylinder.
- 10) When satisfied, cement the 1" Cap into place (with the Piston installed inside as above)
- 11) Screw the brass / plastic air hose fitting into the threaded end of the 90 degree elbow, attach your air hose (attached to a valve) and run your event. Be prepared for the loud hiss of compressed air blowing past the piston's sanded end cap... this is normal, and the hiss adds a startle to your event.
- 12) You can allow the weight of your prop to reset the Piston or you can rig up a spring or other mechanism to return it into place.



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