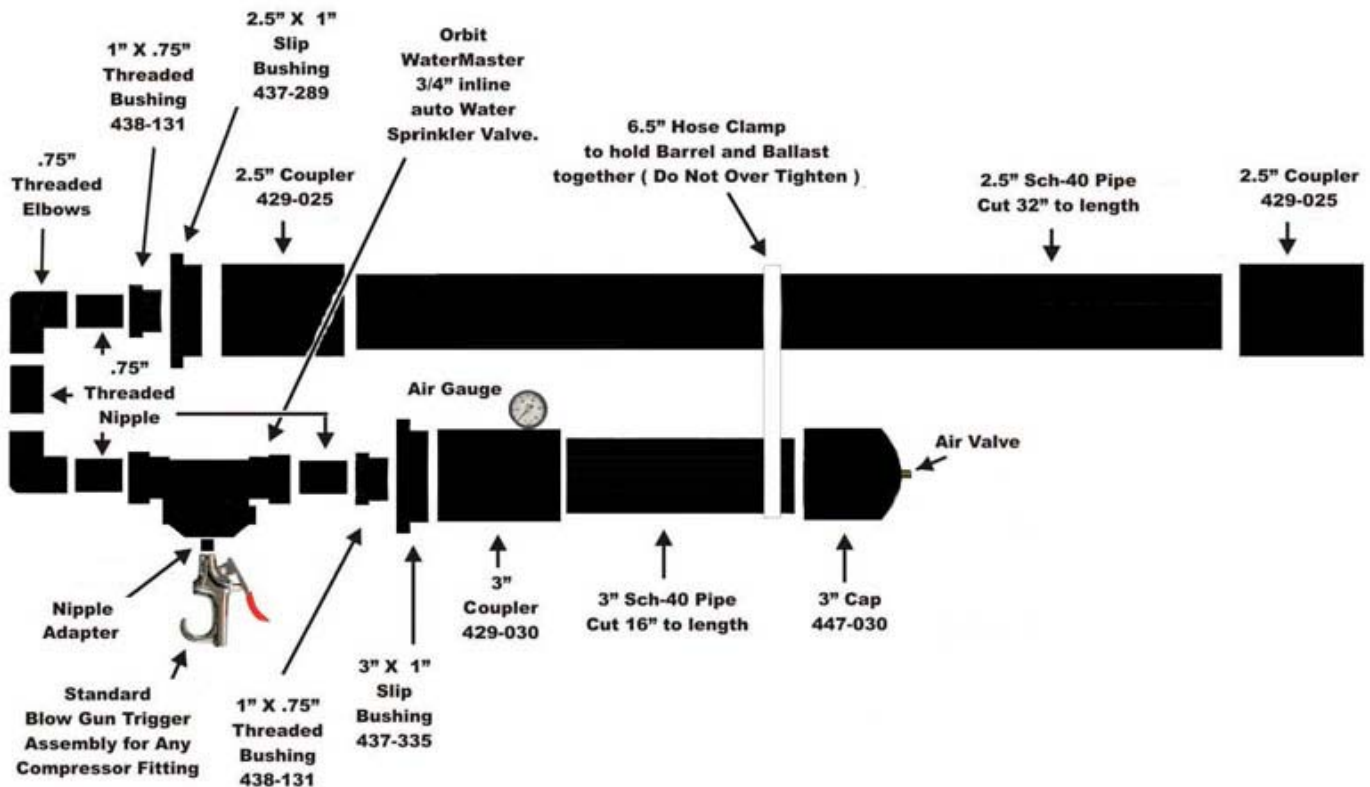


How to Make a Air Cannon

Tennis Ball Air Cannon

Use Schedule 40 PVC Pipe Only

Do Not Exceed 80 psi



-- ATTENTION --

READ ALL DIRECTIONS CAREFULLY AND COMPLETELY BEFORE STARTING PROJECT

Building the Sprinkler Valve.

Step 1: The Sprinkler valve

The first thing that must be done in order to soup up a sprinkler valve is to buy the valve. There is one major thing to consider when buying a valve, does it or doesn't it have a guide rod? A guide rod is a small metal bar inside the valve that guides the diaphragm.. The valve below and through out this how to, is a Watermaster 3/4" inline automatic sprinkler valve.



Step 2: Removing the cover

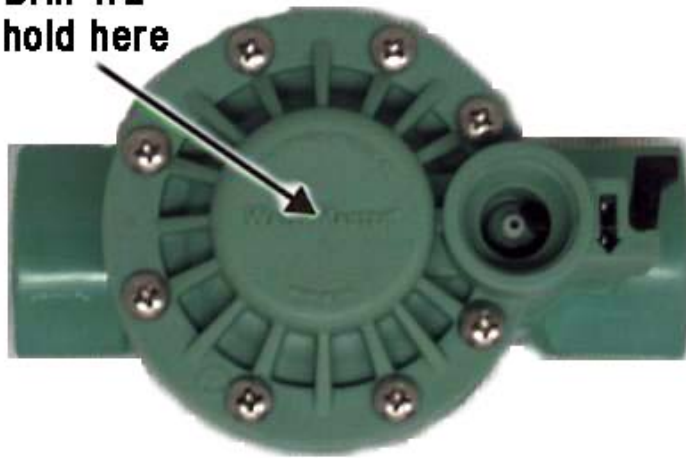


After acquiring your valve you must remove the cover from it. You do this by simply removing the 8 screws in the cover and pulling it off. Below is a picture of the inside and all contents of a Watermaster valve. All other valves should look similar.

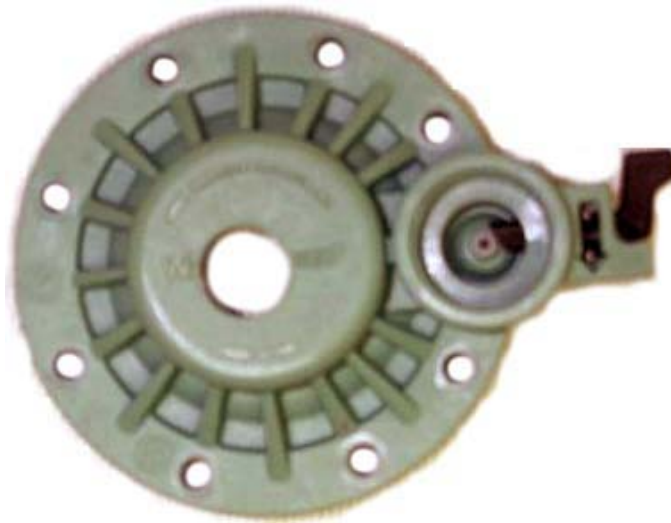
Step 3: Drilling hole in cover

Once you have removed your cover, you need to drill a hole in the center of it. Simply drill a 1/2" hole and thread it with a 1/2" NPT pipe tap. Make sure that the hole will not be in the way of the spring. If your valve has a guide rod, drill to the side of the cover but make sure that it isn't in the way of anything.

Drill 1/2 " hold here



This is what the top of your valve should look like after drilling the hole.



Step 4: Tapping the hole

Now that your hole has been drilled you are ready to tap it for your fitting. If you are using a pipe tap simply tap the hole and move on to step 5.

Step 5: Threading in your fitting and putting it all back together

Now you can just thread the blow gun trigger into the hole. Be sure to use Teflon Tape.



Once you have threaded your fitting back into the valve cover it should look like this: Notice which way valve is facing. This is important for the correct airflow to fire your cannon.



Once your adaptor has been threaded into your cover you may replace all parts inside your valve and screw the cover back down. Be sure that the trigger is facing forward. You can tell this by making sure the old solenoid hole is facing backward.

Step 6: Filling the Solenoid Hole

Your next step is to fill the hole where the little black solenoid attached to the cover. You must also fill the small hole in front of the solenoid port. Do this by applying some JB Weld or Epoxy. Let it set over night. Be sure to remove any excess that hangs down inside the cover, as this will cause the cannon to leak.

Step 7: Constructing the cannon

The final step is to glue the cannon together by following the diagram on the cover of this manual. Be sure to use PVC Primer and PVC Hot Cement. Lay the parts out in the order described above and slowly glue each part to the next. Take your time as the glue sets up fast. Make sure you use plenty of glue so your gun doesn't leak. Let the cannon sit over night so the glue sets up strong. Mount the air filling valve and the pressure gauge using a 3/8" Drill Bit. It is best to use a drill press while holding the ballast in a vise or clamp. This will insure a straight hole and a better seal. Screw both the pressure gauge and Schrader valve in with an open end wrench.

Once your cannon is complete, you can paint it using Krylon "Fusion" Spray Paint. It is specifically designed for plastic.

Step 8: Pressurizing the Cannon

The next step is to fill the cannon with compressed air. Use a common air compressor, either for air tools or for inflating your car tires. You should fill the cannon up to 20-30 PSI and test -shoot the cannon to make sure there wasn't any damage to the cannon during shipping. It is common for the cannon to leak slightly. This will not affect the performance. If the cannon is loosing air rapidly. Please e mail American Air Cannons immediately.

Step 9: Pressurizing the Cannon

The final step is to re pressurize the cannon 60 – 80 PSI. **DO NOT INFLATE OVER 80 PSI !!!** Keep the cannon pointed away from people and property that could be damaged by the blast. Pull the trigger and enjoy!

Tennis Ball Air Cannon Parts List

QTY	Discription	Part #	Store
1	Nipple Adapter for Blowgun	3326 X 4	NAPA
1	Tire Air Valve Threaded	90-294	NAPA
2	2-1/2 inch Coupler	429-025	HPS Pipe
1	2-1/2 inch Sch 40 PVC Pipe : 32 inches	011054	HPS Pipe
1	2-1/2 inch X 1 inch Slip Bushing	437-289	HPS Pipe
2	3/4 inch Threaded Elbows	408-007	HPS Pipe
1	3 inch Sch 40 PVC Pipe : 17 inches	011055	HPS Pipe
1	3 inch X 1 inch Slip Bushing	437-335	HPS Pipe
1	3 inch Coupler	429-030	HPS Pipe
1	3 inch End Cap	447-030	HPS Pipe
1	100 PSI Pressure Gauge Dry	PG100	HPS Pipe
2	1 inch X 3/4 inch Threaded Bushing	627330	Home Depot
4	3/4 inch Threaded Nipple	380967	Home Depot
1	Teflon Tape 1/2 inch X 260 feet	177206	Home Depot
1	Orbit WaterMaster 3/4 inch inline Sprinkler Valve	571006	Home Depot
1	Large 6-1/2 inch Metal Hose Clamp	179957	Home Depot
1	Blowgun Trigger Kit	606343	Home Depot
1	Red Hot Blue Glue	110044	Home Depot
1	Purple Primer	307565	Home Depot

Enjoy, and as always, Keep it safe!

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