Parts List *(can scale to fit needs)*

Frame

* 4 - 3/4" schedule-80 PVC pipe cut into 20" sections
* 4 - 3/4" schedule-80 90° elbows
* 4 - 7/16" x 2" bolts and nuts
* 4 - 1-1/2" medium eye screw
* 5/16” and 1/8" drill bits (and drill) for drilling holes in the boom elbows and PVC pipe
* Zip ties to secure frame pieces
* PVC cleaner and PVC glue (cement)
* Optional: Channel locks and/or nut driver to tighten barb and/or nuts

Boom *(can scale to fit needs)*

* 2 - 1/2"schedule-40 PVC pipe cut to about ~9-1/2" sections
* 1 - 1/2" schedule-40 PVC pipe cut to about ~12" sections
* 1 - 1/2" schedule-40 PVC slip-thread coupler
* 1 - 1/2" to 1/4" threaded reducing bushing
* 1 - 1/4" to 5/8" threaded barb
* 2 - 1/2" schedule-40 PVC slip caps
* 1 - 1/2" schedule-40 slip tee
* Standard (2.4”, outer diameter, 0.97” inner diameter) pool noodles to cover PVC pipes (fame)
* Large (4.5" outer diameter, 2.5” inner diameter) clamp foam noodles to cover smaller noodles over PVC pipe (frame)
* Large zip ties for securing noodles over PVC pipe and smaller diameter noodles

Making the boom frame

* 1. Cut schedule-80 PVC pipe into 20” lengths for the 4 sides of the boom frame.
  2. Glue 4 90°-elbows onto the 4 20” sections to make the boom frame.
  3. Using 5/16” drill bit, drill hole thru each side of each elbow.
  4. Insert the 7/16” x 2” bolts into the holes and tighten nuts (see Figure 1, yellow arrows).
  5. Using 1/4” drill bit, drill small pilot hole into the corner (at the 90°) of each elbow.
  6. Thread or insert the 1-½” medium eye screws into each of the PVC elbows.

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Figure 1: Bolts used to secure glue fittings and increase rigidity and strength of joint.

Boom

1. Cut ½” schedule-40 PVC pipe into two 9-½” sections and one 12” section.
2. Glue the 9-½” and 12” sections into the schedule-40 slip tee to form a “T-shape” which will serve as the boom applicator nozzle and the connection to the pressurized mixing tank.
3. Glue the ½” schedule-40 slip caps on the ends of the 9-½” sections (Figure 2).



Figure 2: “T” bridge with end caps

1. Use a 1/8” drill bit to drill holes about 1” apart into the 9-½” sections which will form boom applicator nozzle (pink arrows, Figure 3).
2. Glue the ½” slip-thread coupler onto the 12” PVC section (red arrow, Figure 3).
3. Screw a ½” to ¼” threaded reducing bushing into coupler (blue arrow, Figure 3).
4. Screw a ¼” to 5/8” threaded barb into bushing (yellow arrow, Figure 3).



Figure 3: Boom applicator spray holes and tank hose connector.

1. Using heavy duty zip ties, attach the “T” to the boom frame by crisscrossing zip ties around the frame (pink arrows, Figure 4).
2. Cut and split standard (2.4” x 0.97”) pool noodles into length to cover schedule-80 frame (see green under yellow near crisscrossed zip ties, Figures 3 and 4).
3. Cut and split large clamp (4.5” x 2.5”) foam noodles into sections to cover standard pool noodles.
4. Use heavy duty zip ties to secure the noodles to the PVC frame (yellow arrows, Figure 4).



Figure 4: Securing boom applicator and floatation to boom frame.