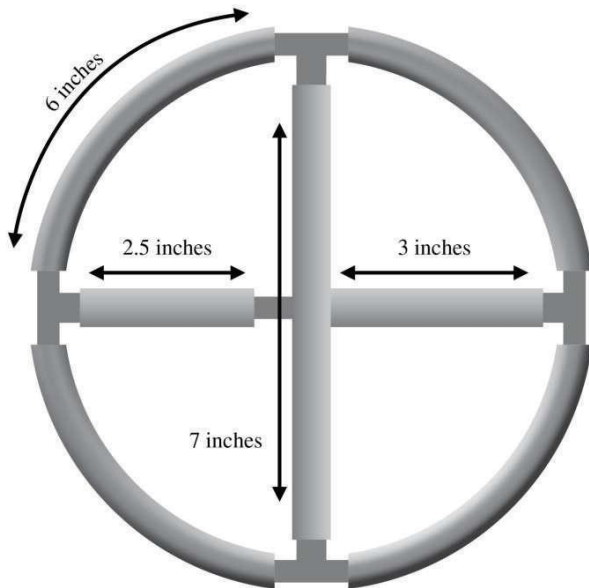


How to Make a Five Gallon Nematode Bubbler

Instructions listed below can be used to create a stock tank bubbler for a five-gallon bucket that can be used to agitate nematode stock solutions.

Supplies Needed to Make a Nematode Bubbler:

- Five ¼ inch barbed tee fittings. (Best barbed fittings are 1-5/16" long with tee barb at 1-1/8" and 1" between first barbs between the two straight sections). Danco fitting Part #52640B, SKU: 037155526406 is a good one.
- 3 ½ feet of ¼ inch ID plastic tubing (rigid white)
- Electric drill and 1/16 inch drill bit
- Cut the following pieces of plastic tubing:
 - Four 6 inch, one 7 inch, one 3 inch, one 2 ½ inch (Note: the 7", 3" may need to be longer (7.5" and 4"))



Assembly: Assemble according to diagram above. Liquid hand dishwater detergent may ease assembly. Also, a heat gun helps to fit the tubing over the fittings. Thoroughly rinse all detergent from bubbler prior to first use. Assemble all fittings except one to allow the use of air to blow out plastic chips. Drill regular holes along entire length of the bubbler at 1-inch intervals. Fasten bubbler to the bottom of the bucket by drilling two holes one inch apart. Use a zip tie to secure the bubbler in place. Use, epoxy, Bondo or hot melt glue to fill holes.

Note: Larger bubblers can be created to accommodate larger volumes. Bubblers should cover the bottom of the tank in order to prevent settling of nematode solutions.

Air Supply: Compressed air or an electric air pump can be used to provide air for the bubbler. Small aquarium air pumps are not suitable as they do not provide sufficient air volume to keep nematode solutions in suspension. Minimum acceptable air pump rating is 2.5 cfm (70 L per minute, 1122 gal/hr).

Supplies Needed to Connect Bubbler to an Electric Air Pump:

- Four to six feet of ¼ inch ID plastic tubing (braided flexible tubing as in the photo to the right).
- Two S/S tubing clamps
- One brass fitting ¼” ID barb x 1/8” MPT
- Air pump with minimum output of 2.5 cfm (70 L per minute, 1122 gal/hr). Suitable air pumps are available on the internet. Go to eBay and search for: “Elemental O2 Commercial Air Pump 1157 gph”. Or type in: <http://www.ebay.com/itm/322176510416>.



Assembly: Replace the barbed fitting on the air pump. Take ¼ inch ID braided plastic tubing and cut to desired length. Attach one end of the plastic tubing to the electrical air pump and the other to the nematode bubbler.

Caution: If creating a bubbler for volumes larger than 5 gallons, a larger pump may be needed to supply sufficient agitation.

Supplies Needed to Connect Bubbler to Compressed Air:

- 3/8 inch air compressor hose cut to length needed retaining male end
- Threaded female quick disconnect
- Female-female quarter turn valve
- Threaded male air fitting
- Two 7/8 inch diameter hose clamps
- Teflon tape

Assembly: Take 3/8-inch air compressor hose, with male air fitting attached to one end, and cut to desired length. If male air fitting is not present attach one using a 3/8 inch brass ferrule. Using teflon tape, connect female-female quarter turn valve to threaded female quick disconnect and threaded male air fitting. Attach air compressor hose to female quick disconnect and join the other end of the air compressor hose to the bubbler. Secure cut end of air compressor hose to bubbler by using two hose clamps.

Adjust air volume with quarter turn valve to keep nematode solution agitated but not so much that froth is created.

