



Installing your Add-on Deionization Kit

Congratulations on your purchase of an Add-on Deionization Kit from Buckeye Hydro – you’ve made the right choice! Please read through the instructions before beginning the assembly/installation.

Start by carefully removing all parts from the shipping box, including any parts shipped within the housing. Identify:

- housing with white lid and clear sump
- two quick connect fittings
- six screws
- plastic or metal bracket
- clear refillable cartridge filled with DI resin
- two 6 ft lengths of ¼” tubing
- housing wrench

Tools needed for assembly:

- tubing cutter, razor knife, single-edge razor blade, or very sharp scissors
- towel
- screw drivers and 5/16” nut driver
- Teflon tape



1. Examine the white housing lid, and note the two threaded ports (holes), one marked “IN” and one marked “OUT.” These labels indicate the correct direction of water flow through the housing.
2. Put six wraps of Teflon tape on each straight quick connect fitting (if they are not wrapped already), and screw each fitting into a port on the lid of the housing. Screw the fittings in by hand, and turn just a bit more with a wrench. These are plastic fittings and can be broken easily with a wrench, so be careful not to over-tighten.
3. Use four of the screws provided to mount the bracket to the lid.
4. Remove the bracket/lid assembly from the clear sump, and take note of the black rubber o-ring about 3.5” in diameter – this o-ring typically stays in a groove in the clear sump when the lid is removed. Be careful not to damage (crimp/bend) the o-ring, which forms the seal between the white housing lid and the clear sump. If the o-ring comes out of the groove in the sump, make sure it is free of foreign objects by running the o-ring through your fingertips, and carefully replace the o-ring in the groove. Use a small amount of food-grade silicone grease to lubricate the o-ring if it feels dry. Silicone grease is available from Buckeye.

5. Mount the lid & bracket assembly to a secure surface (drywall is not a good choice) with two screws through the keyhole slots or holes in the back of the bracket.
6. Use ¼" tubing to connect your water source (typically RO water) to the fitting in the port marked "IN" on the housing lid.
7. Insert ¼" tubing in the fitting in the port marked "OUT." DI water will eventually flow out of this tube.
8. Insert the DI resin cartridge into the housing, with the rubber washer up, and the end that unscrews down.
9. Screw the clear housing (with the DI cartridge inside) onto the lid. Tighten firmly by hand.
10. Trim the tubing to length, if desired. Cut the tubing straight across, and remove any burrs. Reinsert tubing into the fittings.
11. Supply water to the housing. Check for leaks.
12. You'll see water enter the housing between the sump wall and the DI cartridge. Water must flow through the DI cartridge from the bottom up to exit the housing. If water is flowing out of the housing you can be assured the water has had full contact with the DI resin.
13. In some cases water will flow from the DI housing but the housing never fills entirely with water. This situation is caused by air being trapped in the housing. Trapped air generally does not represent a problem, and may be ignored. The air may purge itself from the housing over several weeks. If you'd like to remove the trapped air, with the system running and with a towel handy, unscrew the housing from the lid about ¼ turn – just enough to break the seal at the o-ring. The water level in the housing will immediately start to increase, as water displaces the trapped air. Just before the water level reaches the o-ring, tighten the housing.
14. Discard the first ¾ gallon of water run through the DI resin.



Additional Notes

Treat your DI resin gently! If resin was exposed to freezing temperatures during transit, allow it to warm to room temperature for 24 hours prior to handling it or getting it wet.

Replacing Deionization Resin When water flowing out of the DI stage reads more than "0" or "1" parts per million (ppm) total dissolved solids (TDS), the resin should be replaced. To assure the beads in new mixed bed resin remain mixed, pack the beads tightly in the refillable cartridge. Fill the cartridge to within a 1/4 inch of full with resin. Compact the resin by bouncing the cartridge repeatedly (~20 times), rubber washer end down, on a hard surface from a height of about 0.5". Add more resin and repeat the process twice. Fill the cartridge a last time to within 1/8" of the top and compact the

resin again. If you see any settling, refill to within 1/16" of the top, and replace the cap. Don't use the first ¾ gallon of water run through new resin. 1.25 lbs or resin is sufficient to pack a 10" x 2.5" (nominal) refillable cartridge.

Leaks Should the housing ever leak near the threads that join the sump to the lid, first try to tighten the sump with a housing wrench only about 1/8 of a turn. If the leak continues, turn off the water supply to the housing, remove the housing from the lid. Run your fingertips on the flat surface of the lid that seals against the o-ring. The surface should be flat and smooth – free of any burrs, chips, or other damage. Similarly, check the groove holding the o-ring in the clear sump for damage. If either the lid or sump are damaged, they should be replaced – contact Buckeye.

Carefully remove the black rubber o-ring from the groove in the clear sump. Check to see that the o-ring isn't damaged (e.g., bent, folded, chipped, nicked, cut). Damaged o-rings should be replaced – contact Buckeye.

Assuming the o-ring isn't damaged, gently clean the o-ring with soap and water, and shake the o-ring dry or pat it dry with a lint free cloth. Lubricate the o-ring with a small dab of food-grade silicone grease (*don't* use petroleum jelly/Vaseline).

Spread the grease over the entire surface of the o-ring by running the ring and lubricant through your fingertips. Place the lubricated o-ring back in the clean, undamaged groove in the sump.

Screw the housing back onto the lid and tighten snugly by hand, and if necessary, just an 1/8 turn more with a housing wrench. If the leak persists, the o-ring should be replaced – contact Buckeye. Never use Teflon tape on the threads joining the sump to the lid.

Tighten fittings carefully as shown in the picture to the right. If fittings leak where they screw into the lid, and the fittings are tight (but not over-tightened), remove the fitting and apply Teflon tape and/or thread sealant, and screw the fitting back into the lid.

If a leak is observed where tubing enters a fitting, first push hard on the tubing to assure it is fully inserted into the fitting. If the leak persists, remove the tubing from the fitting by pushing in on the ring ("collet") surrounding the tubing and pull the tubing gently from the fitting. Trim off the end of the tubing if the tubing wasn't cut square, or if you can feel scratches/grooves in the tubing. Reinsert the tubing fully in the fitting.

