

Delonghi Magnifica Automatic Refilling Water Tank DIY Conversion Kit

Never Refill Your Water Tank Again, Compatible with ESAM3300, ESAM3400, ESAM3500, ESAM4400, ESAM4500 & More.

Disclaimer (Please read it thoroughly)

By installing and using this Custom modification to your Delonghi Coffee Maker (further referred to as "the appliance" you agree that the designer, author, provider or re-seller is in no way responsible for damage to persons, appliances or property.

Liabilities: *The designer, author, or re-seller assumes no responsibility for the modifications to your appliance. Although to our knowledge the instructions are accurate, this includes any errors that the instructions may contain, any differences between your appliance and the one(s) showcased, as well as any errors in the instructions. If you don't feel comfortable working with the tools mentioned we suggest you let someone with some experience do these modifications. The installer should possess a good understanding of the mechanical system of the coffee maker being worked on. Please double check all your actions and ALWAYS work with protective eyewear at all times. Always keep your safety and that of others as the highest priority.*

Warranties: *The modifications described in this document could potentially void any manufacturer's warranty you may have left on the appliance (not likely, but possible nonetheless). You assume all responsibility if your appliance is still covered by warranty.*

Legalities: *Laws in your country/state/region/whatever may not allow you to modify systems such as these on your appliance. Please check with your local authorities to be on the safe side.*

We assume NO RESPONSIBILITIES [emphasis added] what so ever for any accidents caused by the person or persons while or after performing this great upgrade to this already magnificent appliance, or while enjoying its results. Being able to enjoy multiple cups of coffee without the burden of continuously refilling the water tank is a tremendously satisfying experience. We always endorse good, safe and responsible coffee consumption at all times.

License Agreement: *By purchasing this DIY upgrade, the purchaser, Installer or builder (referred to as the purchaser) agrees to the following:*

- *This license is for the purchaser of the unit only*
- *The purchaser is NOT permitted to reverse engineer copy and/or re-sell any units conceived or provided by IMP Concepts or a certified re-seller to any other person or persons, individual or company without written permission from IMP Concepts.*
- *The purchaser is strictly forbidden to publish any associated plans, diagrams or installation instructions for these or any of the designer's or author's designs for any purpose whatsoever, without written permission from the designer and author (IMP Concepts)*
- *Publishing any information about this unit, other than general descriptive information (with reference to the designer and author and their web site) is also strictly forbidden.*
- *Additional units must be purchased for use by other individuals.*

Any Violation of this agreement will be prosecuted to the fullest extent of the law.

With that, good luck, and have fun and enjoy hassle free coffee drinking, do not forget to regularly clean you appliance for best performance.

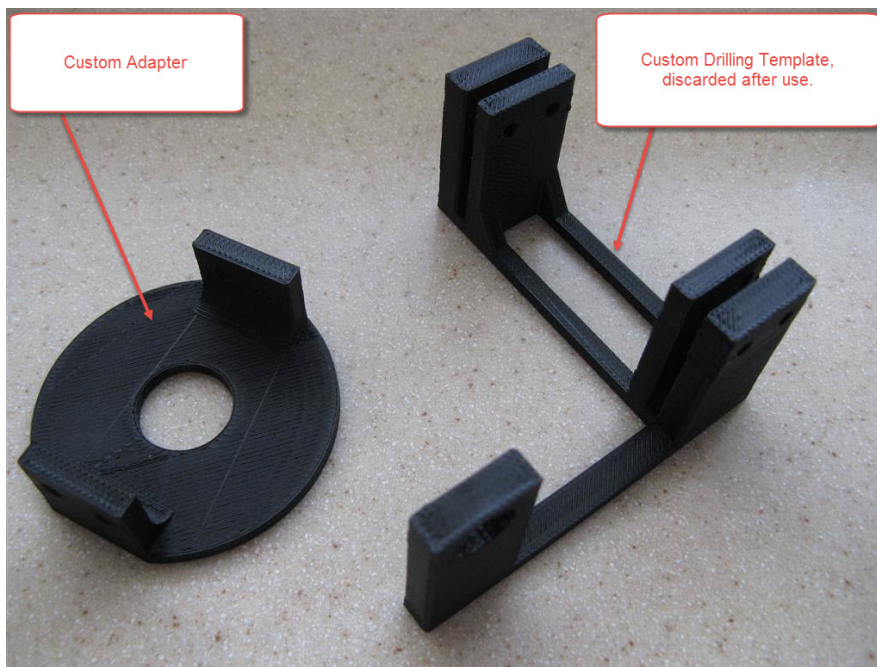
Introduction:

Thank you for trying out my auto refill Adapter Kit, it will allow you to convert your manual refill water tank to an automatic water supply for the Delonghi Magnifica Coffee Maker. This kit is designed for the Delonghi Water Tank Part Number: 7313228241. Please read this document carefully before starting the installation.

You should have received 2 x 3DP Parts as listed below and this document emailed to you:

- 1 x Custom Float Adapter (This is provided with a 16mm (.66" US) Valve Stem hole as is standard for float valves with a screw stem. Some are a push fit and require the optional grommet mentioned below. You will need to drill the hole out to about 21mm (.8" or 13/16th US) to accept the large grommet if needed
- 1 x Drilling Template

Example Photo of received parts:



Important Notes:

This is a DIY Kit and required you to provide additional parts as listed in this document. The photos contain the additional parts required as well as those received.

We recommend that you **ALWAYS** wear protective eyewear when drilling all parts as described in this document. We are **NOT** responsible for any damage caused to property or persons as a result of performing the actions specified.

Parts Required (Excluding the Coffee Maker itself and the water tank).

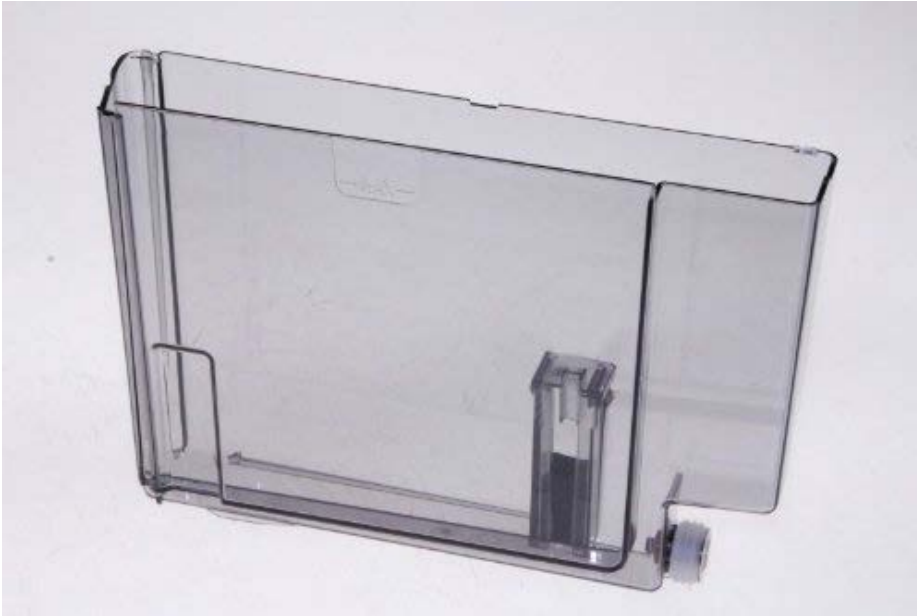
- **1 x Mini Plastic float valve assembly** (Available at most Aquarium Ships & from sellers on eBay) Photos are provided for your convenience as there are a few options. The key in selecting a float is the width of the float itself. We will list the dimensions of the float valve we recommend
- **4 x 3mm (About 10mm or .5" US in length) Countersunk Stainless Steel machine screws and nuts** (Similar US sizes may be selected as desired) Stainless Steel is mandatory because of their proximity to water and damp conditions.
- **1 x Small Rubber Grommet** (Any common 0.5", 14mm OD Grommet with a 6mm or 1/4" US ID for the supply hose will do)
- **1 x Large Rubber Grommet** (Specific Sizes & Details will be provided in Enclosed Documentation) This MAY NOT be required depending on the Float assembly you chose. We provide this info as some floats come with a smooth fitting valve stem. The one we used was 26mm (1" US) OD and 15mm (.60" US) ID for the valve stem.
- **3mm Drill** (1/8" US) we recommend the pilot style drills used for drilling Plexiglas and hard plastics
- **9mm Drill** (11/32" US), we recommend the pilot style drills used for drilling Plexiglas and hard plastics. This drill is for the supply line grommet selected above. Please use the appropriate drill for your selection.
- **Countersink Drill Bit**
- **6mm Plastic Water Pipe** (1/4" US) Available at most hardware stores, length is dependent on your water source
- **Miscellaneous Quick Connect fittings 6mm** (1/4" US) plastic potable water connections and unions
- **6mm (1/4" US) Plastic Potable Water Pipe**

Optional Parts:

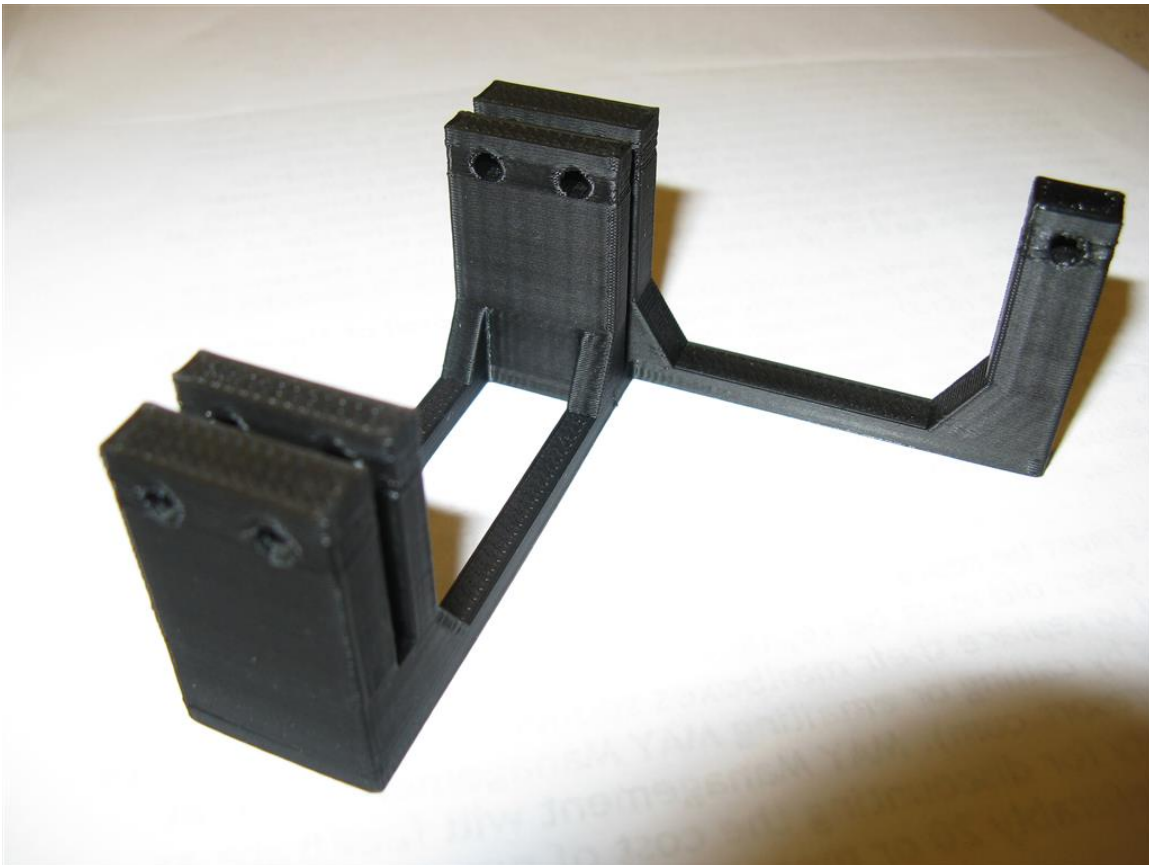
- **1 x In Line Water Purification Filter for 6mm Plastic Water Pipe** (1/4" US) Available at most hardware stores, length is dependent on your water source
- **1 x quick connect In Line Water Valve 6mm** (1/4" US)

Installation Procedure:

1. Remove and clean the water tank from your coffee maker. It must be Part Number: 7313228241 as shown here:

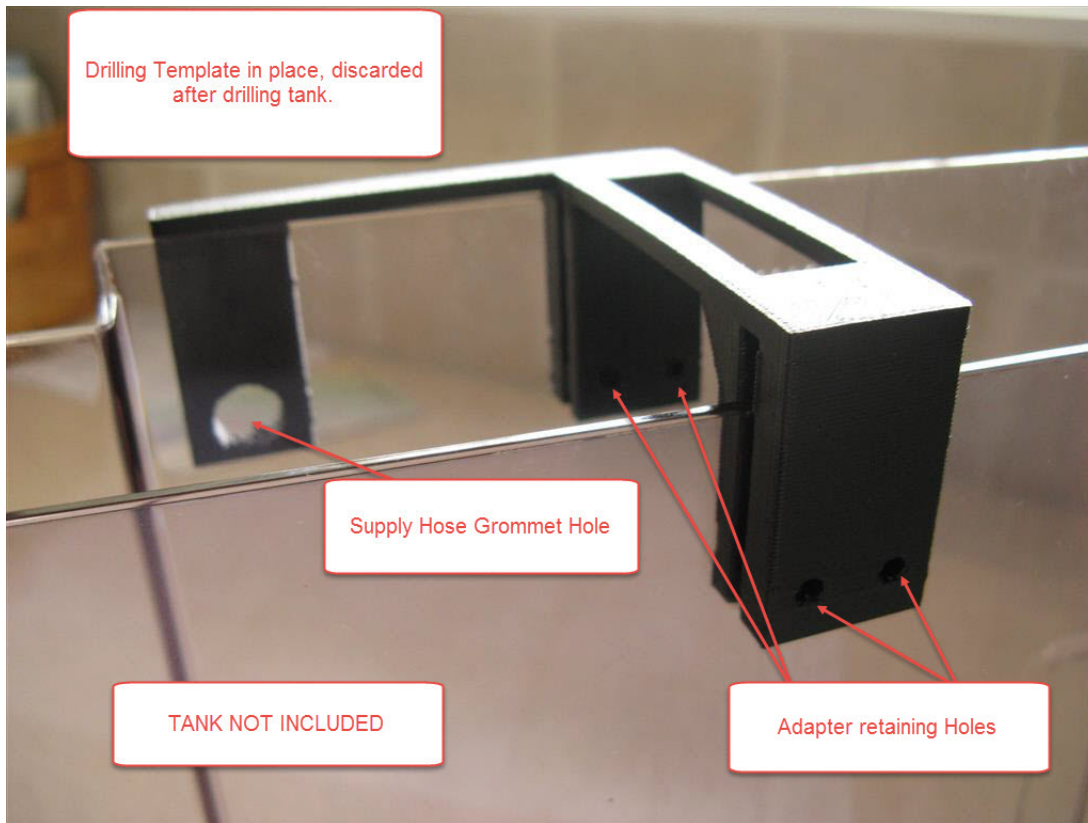


2. Locate the Drilling Template provided with your DIY kit. It will look similar to the one below:



We have updated the template to have a small pilot hole for the supply tube grommet; this is intentional in case you decide to use a different sized grommet. Please select the correct size pilot drill so the grommet selected fits snug. Our examples use the sizes for the grommet mentioned in the above list of required parts.

3. Position the template on the water tank as shown below:



Note the orientation of the template; it fits into the small cut out on the top LEFT edge of the water tank, when viewed from the FRONT of the coffee maker. First carefully drill a small pilot hole using the 3mm or 1/8" Pilot Drill, before drilling the final hole for the supply hose grommet as seen in the above photo. The Supply hose enters the tank from the RIGHT rear of the water tank when viewed from the FRONT of the coffee maker.

4. Carefully drill the 4 x 3mm or 1/8" US adapter retaining holes using the Pilot Drill. 2 on the LEFT side and 2 on the RIGHT. The plastic is hard, take your time, and use a Pilot Drill (The one's with a point in the center and follow the recommended drill speed). Once drilled you can countersink the holes so they fit snug and flat with the screws you chose earlier for retaining the adapter. Please remember the plastic water tank can **crack VERY easily**, extreme care and the recommended drill speed for the chosen drill must be adhered to. We are NOT responsible for any damage to the tank. Slight stress marks are expected and are well above the water line so there is no chance of any leakage. You may now discard the template. We are not liable for any damage to your water tank.



5. We drilled the hole for the supply hose grommet to 3mm (1/8" US) FIRST then expanded it to fit our selected Grommet. The Final size is: 9mm or .35" or 11/32" US. It does not need to be perfect as the Grommet is well above the water line. You can see the grommet in place in the photo below:



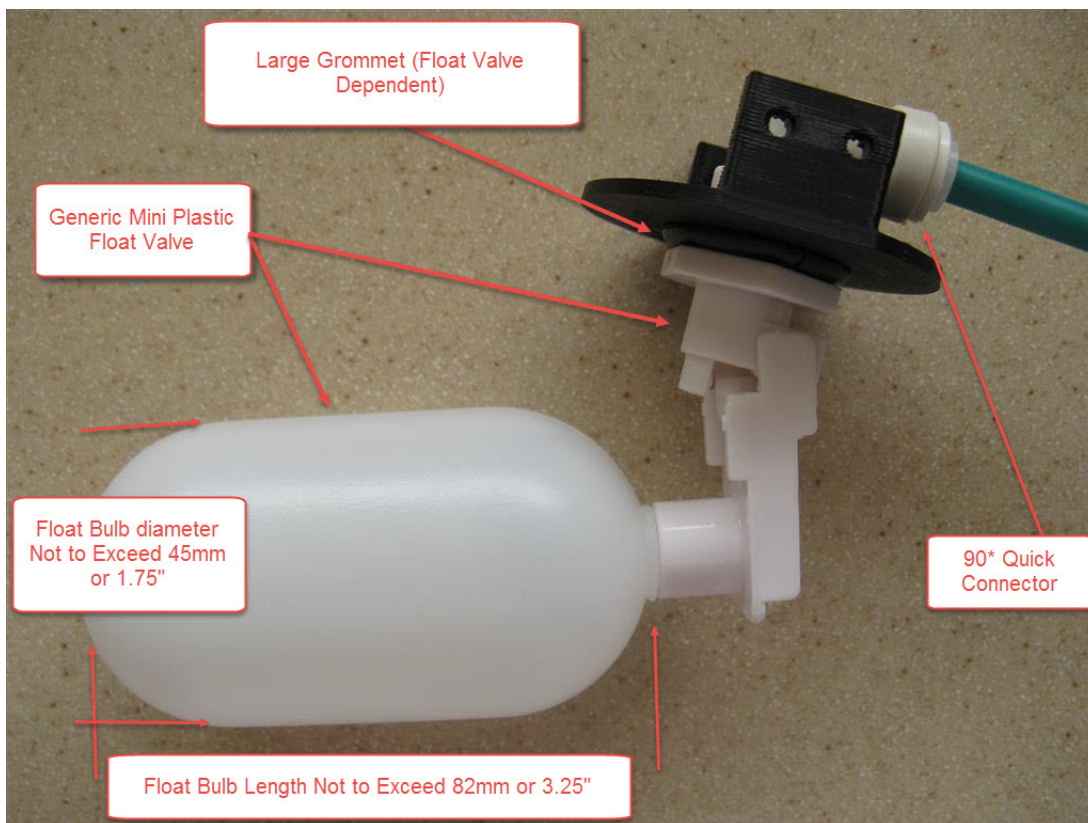
6. Assemble the pieces for the float valve assembly as shown below. There are lots of economical choices for miniature aquarium or reverse osmosis float valves available. We got ours from eBay.

You will need the following:

1 x miniature Float Valve Assembly (Bulb Max Diameter not to exceed 45mm or 1.75" US, Bulb Max Length not to exceed 82mm or 3.25" US)

1 x 90 Degree Quick connect 6mm or ¼" US potable water connector that fits into the float valve you chose. Most come with one already installed.

7. Assemble the float valve and adapter plate as shown in the photo below:



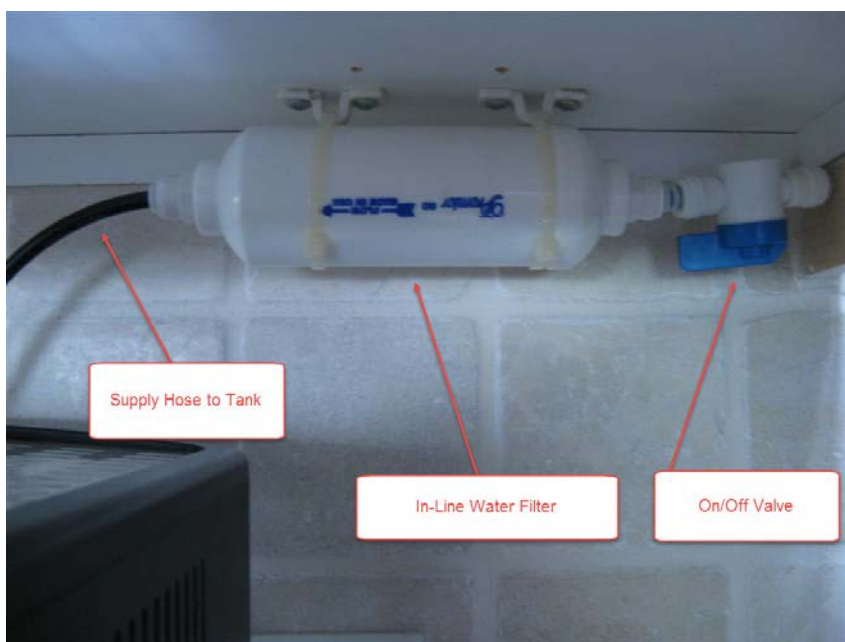
8. Using the ~10mm or .5" countersunk Stainless Steel screws and nuts selected carefully assemble the adapter and float into the water tank float forward. The float bulb should be about half way in the tank, do not be concerned as it continually fills the tank with water.

It should look like the photos below:



9. Now all you need to do is run the water hose through the grommet and at a 45 or 90 degree angle so it sits snug in the quick connector. There will be a little stress at first but the hose will adapt to the bend. DO NOT kink the hose as it will restrict water flow. You may want to heat up the hose slightly in some hot water and bend it roughly to shape before installing it in the tank.

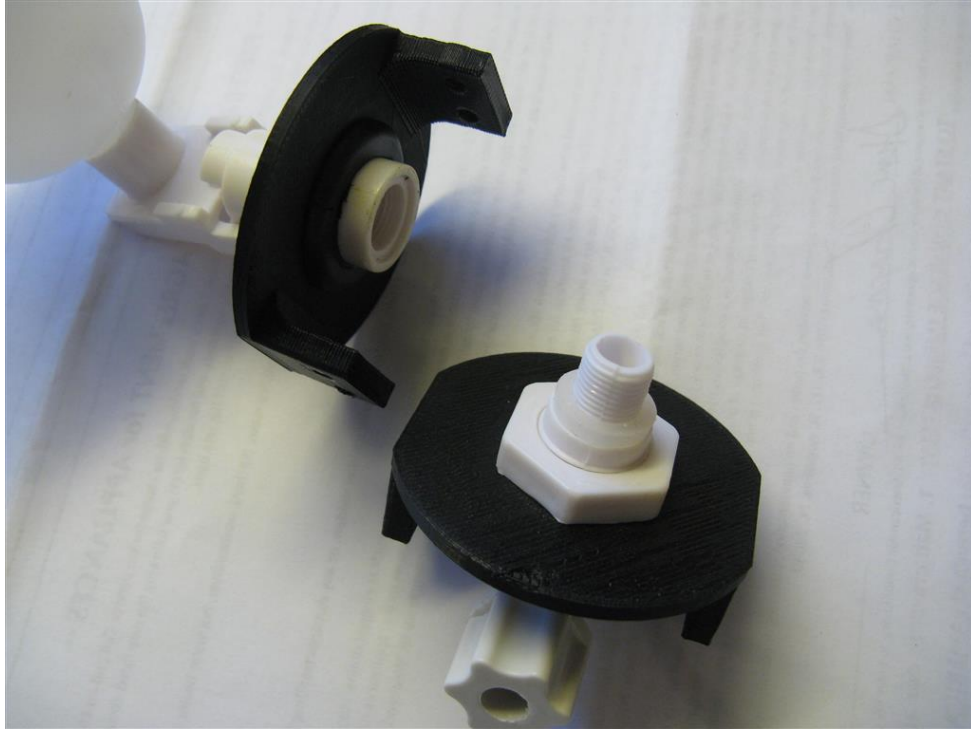
Make sure you have enough hose to reach your water source. Here is an example of one with a filter and valve installed:



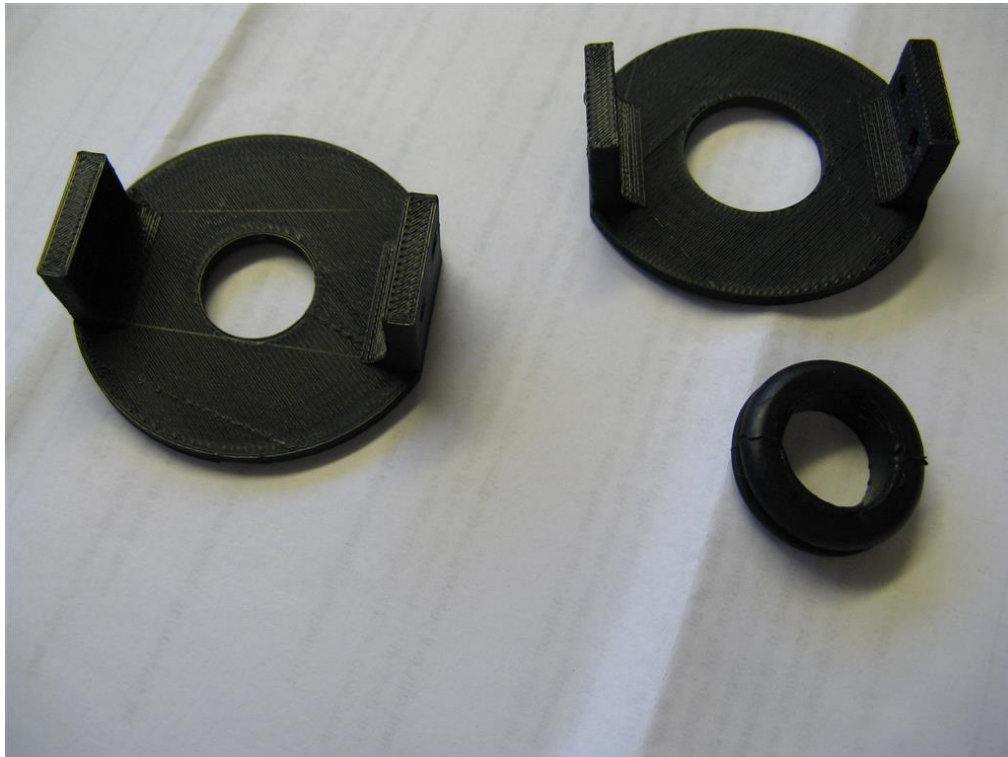
10. Now install the tank and enjoy your coffee

Photos of the completed install showing water level and general information.

Different float mounting assemblies, screw type and smooth flange using grommet.

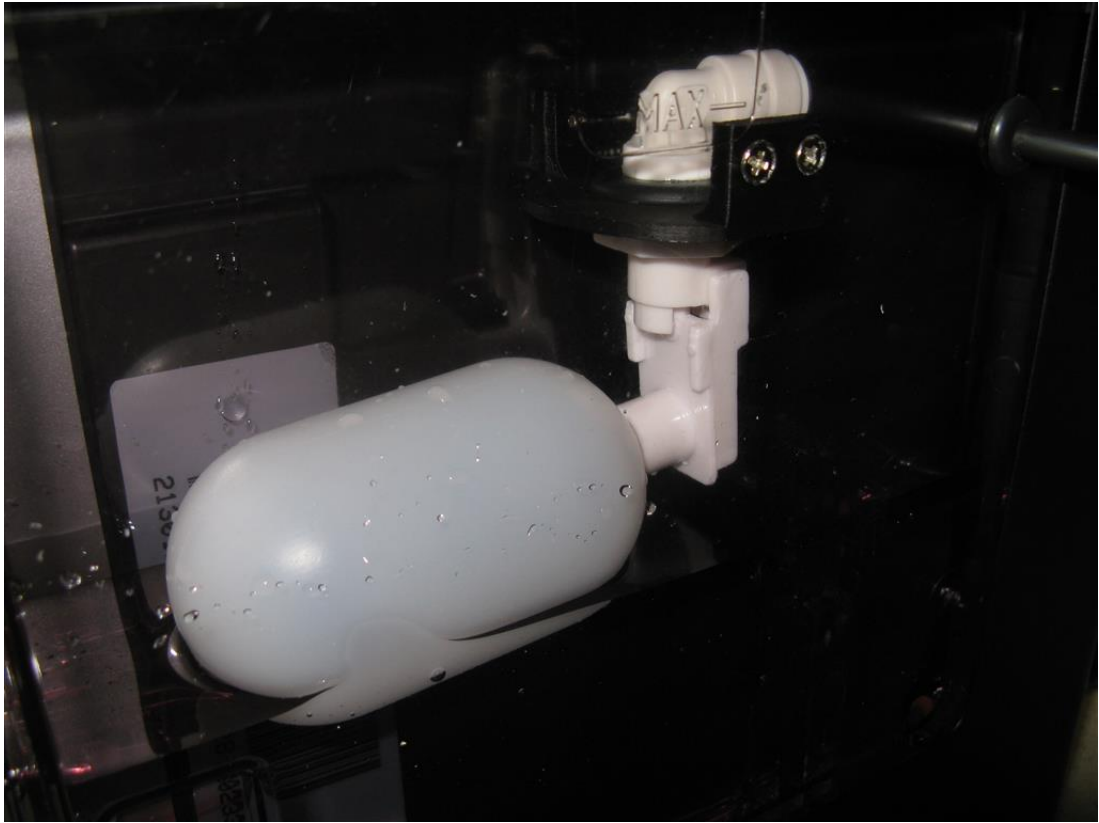


Flange not enlarged for screw flange and flange enlarged for smooth flange and grommet



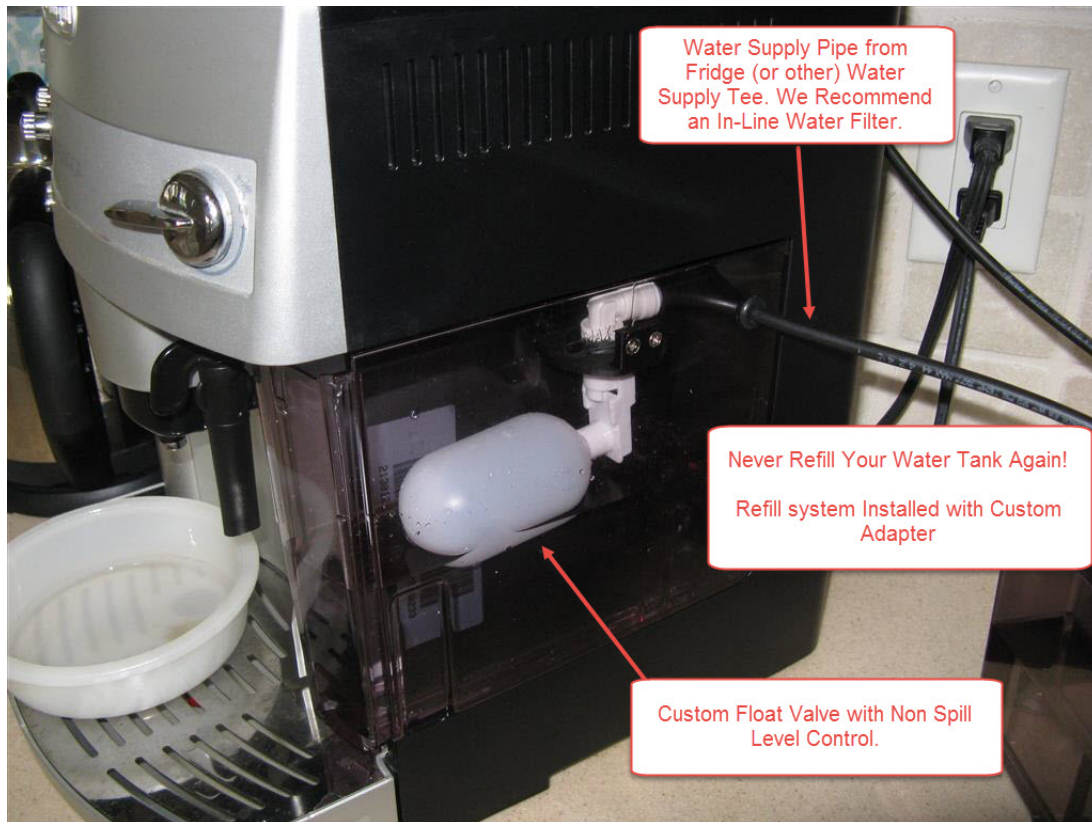
Miscellaneous helpful photos of the parts







Completed install in a Delonghi ESAM 3300



Now Go and enjoy your IMP Concepts Delonghi "No More Refills" Water Tank system

Copy write: Ian Soler (AKA ShokWaveRider)