

# How to install a bulkhead fitting

This workflow will guide you through a standard bulkhead fitting installation.

Materials needed:

- **Bulkhead fitting pieces**
    - *Body*
    - *Gasket*
    - *Nut*
    - *Washer* (Not an essential part)
  - **Permanent marker or grease pencil**
  - **Power drill with appropriately sized hole saw attachment**
  - **Deburr tool or a pocket knife**
  - **Channel locks or a pipe wrench**
  - **Extendable reach tool, rope, fish tape snake, or some means of reaching into the tank**
  - **Suction Hose/Water to rinse**
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## STEP 1

### Find and mark installation point

- Many water tanks will feature flat spots as designated installation points
  - Some tanks will even feature a **divot** on the flat spot to serve as a **pilot hole** for your drill
  - If your tank does not feature a pilot hole divot, you can place the **nut** from the fitting on the tank, making sure you have enough height clearance above the bottom knuckle radius, and use your **marker** to mark a drill point in the middle of the nut.

*Note: If your tank doesn't feature a flat spot, or you want to install a fitting onto the rounded sidewall of a tank, additional considerations must be made, including that the pressure from the seal will create a flat spot on the sidewall of the tank.*



## STEP 2

### Drill the hole for the fitting

- Use your **drill** with your hole saw attachment to create the opening in which the bulkhead fitting can be installed.
- You'll notice that drilling the hole will leave the edge rough, with loose plastic shavings. Use your **deburr tool** or a small **knife** to smooth the edge of the hole to ensure the best possible seal.
- *Note: Skipping this step can compromise the liquid tight seal and cause this connection to leak*



## STEP 3

### Rinse and drain your tank

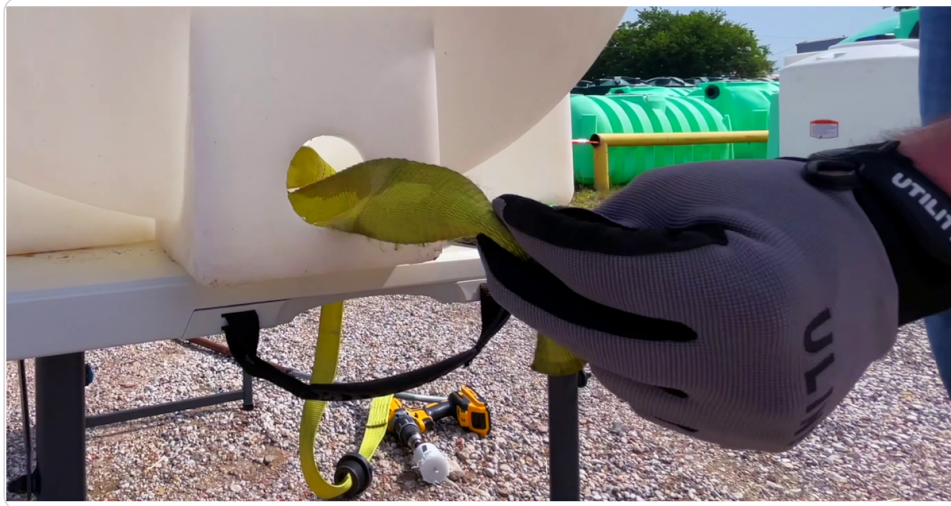
- Use your **water hose** to rinse and drain your tank to remove any plastic shavings and any other debris from the bottom of the tank
- These plastic shavings could clog your piping if left in the tank.
- You can simply tip the tank over to pour out the water and debris after the rinse.



#### STEP 4

##### Insert fitting body through the drill hole on the inside of the tank

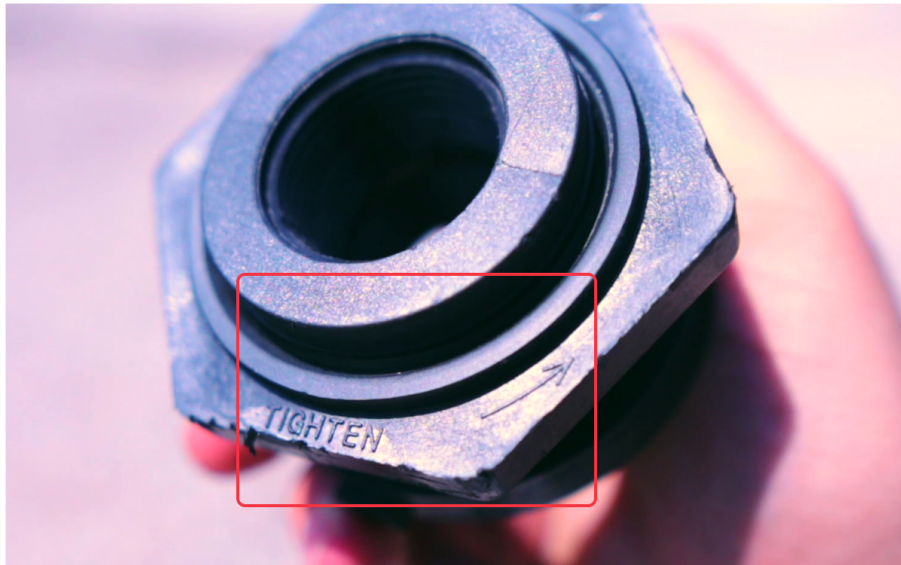
- You can either use your **reach extension device** (whether that be a long pole, a reach extender grabber, or other tool you can use to reach inside the tank) or you can thread **rope/cording** through the body to guide and pull it into the drill hole. We've found that a fish tape cable snake also works well for this.



#### STEP 5

##### Hand tighten nut onto bulkhead body on the outside of the tank

- Once it's in place, hand tighten the nut onto the bulkhead body on the outside of the tank.
- Make sure the word "Tighten" is facing you. This may feel unintuitive because you'll need to screw to the left to tighten.

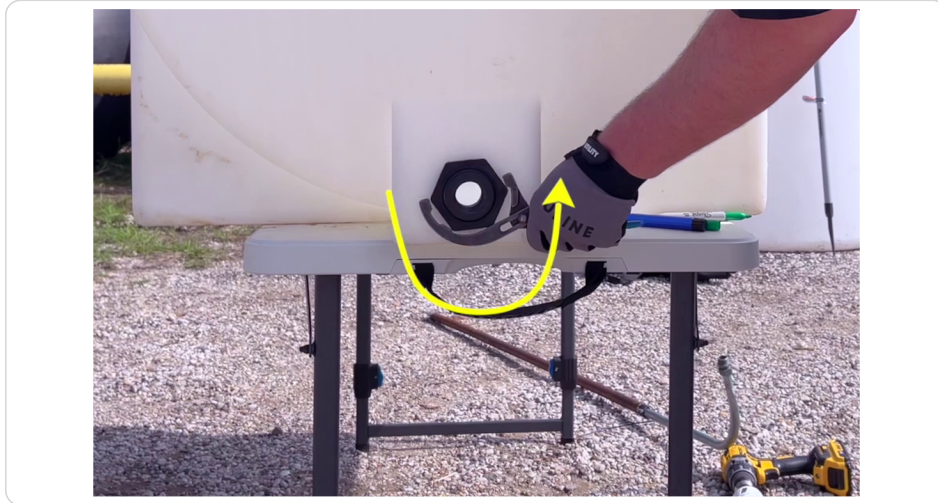




## STEP 6

### Use channel locks to tighten the nut by 1/4-1/2 turn

- After the nut is hand-tight, use your **channel locks** to tighten by 1 quarter to 1 half turn.
- *Note: Make sure not to over-tighten the nut. Over-tightening can compress and warp the internal gasket, causing the water-tight seal to fail and leak*



## STEP 7

### Attaching accessories

- Now that you've installed your **bulkhead fitting**, you'll be able to attach any of our wide variety of accessories from hosing to valves to meet your plumbing needs.
- *Note: a minimum of 12" of flexible hose or piping directly after any adapters or valves is recommended.*

