



# ROV Buoyancy & Ballast

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 **TOOLS:**

- [Hacksaw](#) (1)
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## Step 1 — Ballast Selection



- Using the information found in the 'Buoyancy Theory' guide, select the ideal ballast material for your application.
- For ease of explanation, this guide will refer to pool noodle foam as the ballast of choice.
- ⓘ Your Development Class ROV Kit includes two lengths of pool noodle foam for use.

## Step 2



- Using the previous calculations, determine the quantity of ballast required to meet your buoyancy needs.

### Step 3



- Using a ruler, or similar measuring device, mark the desired length of pool noodle .
- A whiteboard marker or similar will suffice for this application.

### Step 4



- Using a vice, hold the pool noodle in place ready for cutting.

## Step 5



- Using a hacksaw, carefully cut the desired length of foam, taking the time to ensure a clean cut at a 90° angle to the end of the foam.
- Slight variation may occur depending on the type of blade used, however we recommend long, slow cuts.
- It is also recommended that the foam be supported on both sides of the blade to create a clean cut.

## Step 6



- You may wish to cut your length of foam to wrap the PVC frame.
- To do this, we recommend using a 20-25mm spade bit with a drill.

## Step 7



- Take time to measure and mark the desired location(s) for the hole before drilling.
- Using the vice to hold the foam in place, carefully drill out the hole(s).
- A slow cutting speed is recommended to avoid tearing the foam.
- Drill until the bit enters the hollow centre of the noodle.

## Step 8



- Finally, mark a centreline down the full length of the noodle, ensuring it is lined up with the hole(s).

## Step 9



- Using a hacksaw, carefully cut down the marked line into the centre of the noodle.

## Step 10



- Mount the ballast to the ROV.
- You may now submerge the ROV in a body of water to test for buoyancy.
- For instructions on how to test your ROV's buoyancy, refer to the 'Testing for Buoyancy' guide.