



StarTank Fuel Sensor Note

The StarTank algorithm for fuel works differently than it does for water. For water, the process is simple: the sensor sends a signal that bounces off the **water surface** and returns to the sensor. We then calculate the distance based on that reflection.

Fuel has different properties. We detect the level using **Time of Flight**; the signal travels from the sensor, through the fuel layer, reflects off the metal plate at the bottom, and travels back to the sensor. Based on this travel time, we establish **reference values** for empty and full states, which the Cerbo uses to calculate the display percentage.

Please note that the value you see is a **reference value**, not a measurement in **centimeters**, even though the Cerbo displays it as "cm."

Since the signal is a beam, the required size of the metal plate depends on the distance between the sensor and the tank bottom. **The larger the metal plate, the better the reflection will be.** The StarTank and the metal plate should both be centered.

For calibration:

1. When the tank is empty (or nearly empty), put the StarTank into **Sleep Mode**, then wake it up again.
2. Check the **Sensor Value** on the Cerbo and enter this number into the "Sensor value when empty" field.
3. Once the tank is filled, check the value again and update the "Sensor value when full" field.

By doing this, the StarTank will re-detect its **surrounding environment** upon waking up, resulting in a much more accurate measurement.

I hope this helps.