

DUT-E ATS

# DUT-E ATS automatic tank calibration station

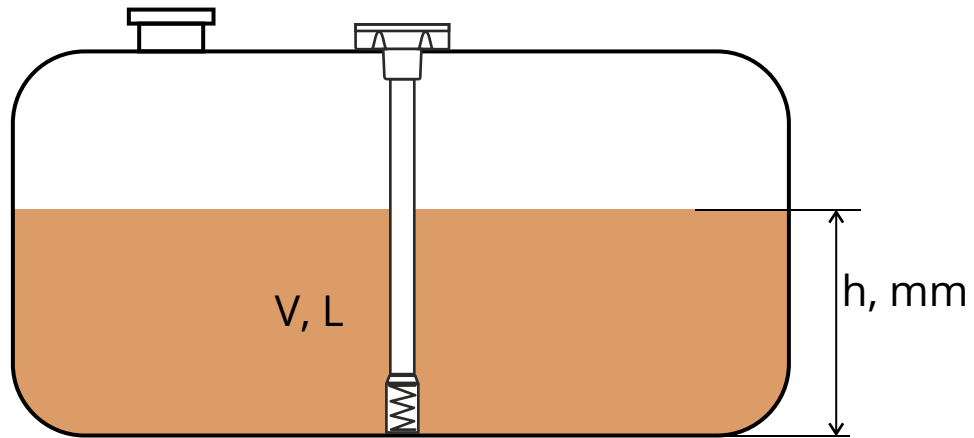


## Purpose



DUT-E ATS automatic calibration station is designed for high-accuracy fuel tank calibration. The station accelerates installation and minimizes effort during fuel monitoring system setup.

# Why fuel tank calibration is necessary

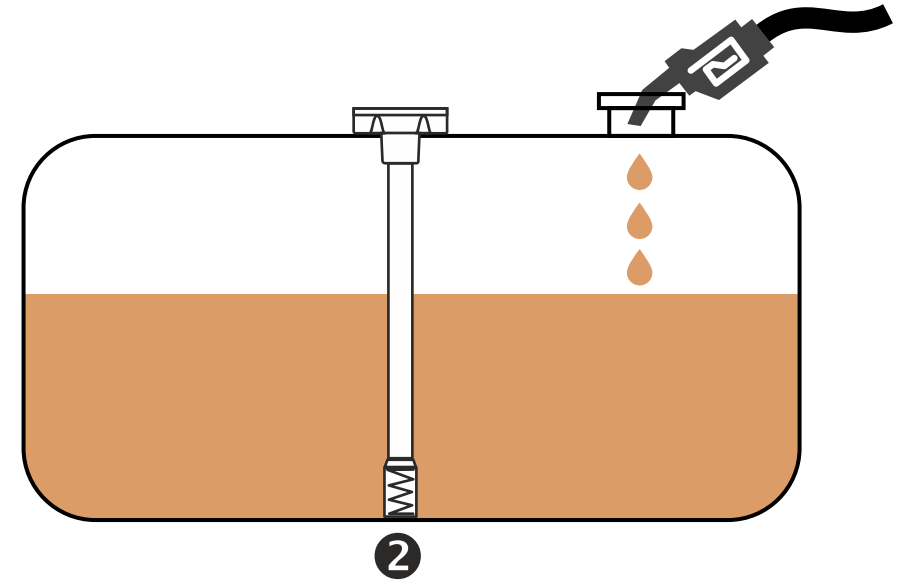
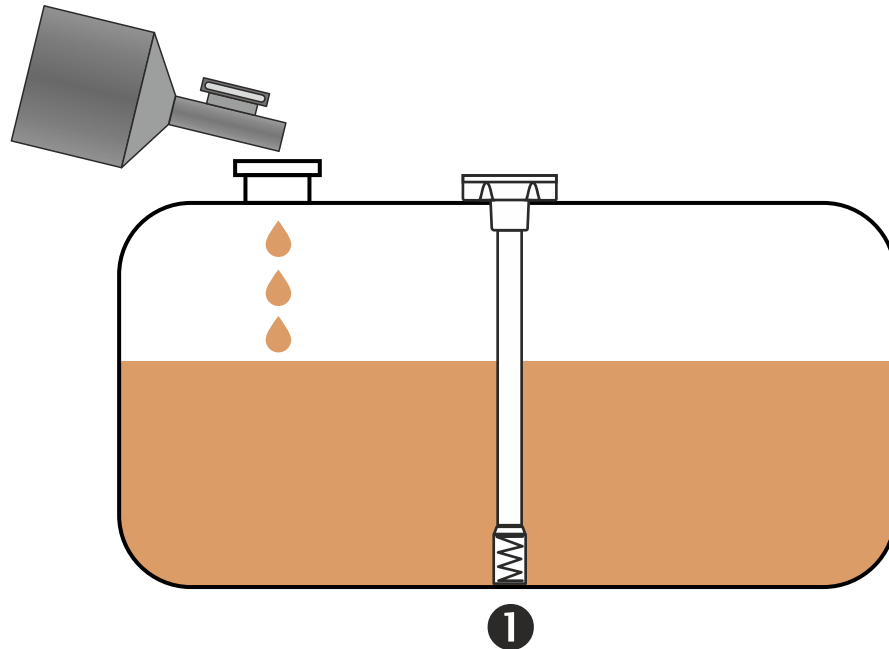


Volume (V), L	Level (h), mm
20	10
40	18
60	26
80	33
100	39
120	45
160	52
180	60
200	70

Purpose of calibration is to create a table that correlates fuel level readings with the fuel volume in the tank (calibration table).

Calibration is performed when a fuel level sensor is installed in the tank. Without precise calibration, the sensor readings will may have significant inaccuracies.

## Standard calibration methods



- ① Calibration with a measuring vessel. Time to calibrate a 500-liter tank: at least 60 minutes. Provides high accuracy but is **labor-intensive and time-consuming**.
- ② Calibration at a fuel station. Time to calibrate a 500-liter tank: approximately 40 minutes. **Accuracy is lower** than calibration with a measuring vessel, and **finding a suitable fuel station is not always possible**.

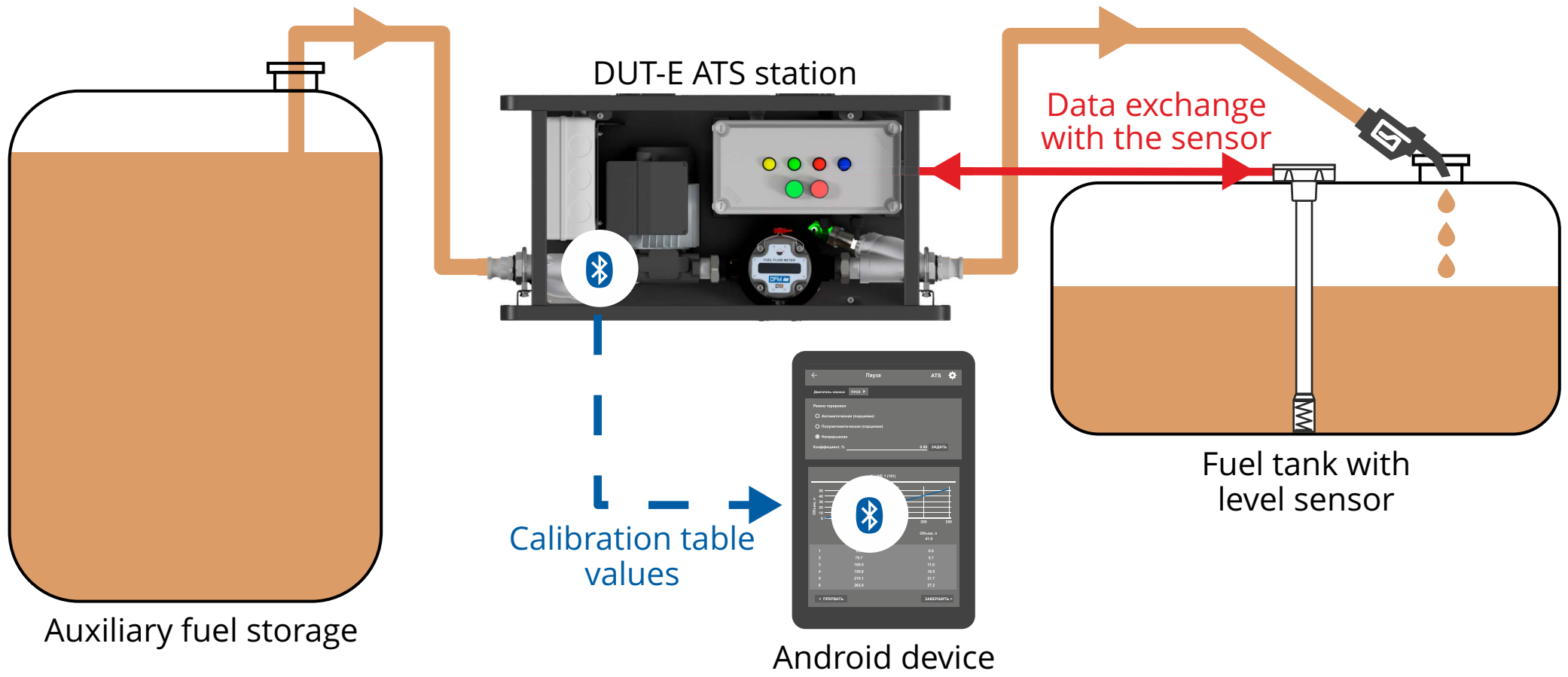
## Advantages of DUT-E ATS using

- ✓ **4-6 times faster calibration** process: Significantly reduces the time required for tank calibration.
- ✓ **Increased efficiency** for fuel monitoring system installers: The installer can perform other tasks while the tank is being calibrated.
- ✓ **No human factor influence**: Ensures precise calibration, eliminating the risk of human error.

### Example: calibration time for a 500-liter tank

- ✓ DUT-E ATS (Automatic Mode):  10 minutes
- ✓ Installer (Fuel Station Calibration):  40 minutes
- ✓ Installer (Measuring Vessel Calibration):  60 minutes

# Operating principle



## Features

- ✓ The calibration table is recorded directly into the sensor's memory (for DUT-E, DUT-E GSM, DUT-E 2Bio, DUT-E S7, DUT-E 2Bio S7).
- ✓ The calibration table can be stored in the Fuel Tank Monitor mobile app (for wireless BLE sensors DUT-E S7 and DUT-E 2Bio S7).
- ✓ Continuous operation throughout workday – capable of calibrating tanks up to 80,000 liters.
- ✓ Auto shutdown upon calibration finishing or in case of excessive pressure/temperature.
- ✓ Compatible with both analog and digital fuel level sensors from any manufacturer.
- ✓ Simultaneous calibration of multiple tanks – supports connection of up to 5 sensors.

## Three modes

**Automatic.** Fuel is transferred to the tank in portions. After each portion is transferred, the pump stops. Once the fuel level stabilizes, the pump restarts automatically. A new point is added to the calibration table after each pump activation.

**Semi-automatic.** The user manually starts the pump. Fuel is transferred to the tank in portions. After each portion is transferred, the pump stops. A new point is added to the calibration table after each pump activation.

**Continuous.** Fuel is continuously transferred to the tank. New points are automatically added to the table after equal portions are filled. Recommended for tanks with a simple shape and no internal partitions, where fuel level stabilization occurs quickly.

# Bluetooth control

In automatic calibration mode, a smartphone or tablet can be moved out of the Bluetooth signal range.

The calibration table is generated in the controller of DUT-E ATS. Once calibration is complete and mobile device is returned to the Bluetooth signal range, the table will be displayed in the app.

Service ATS app for calibration station control is available on Google Play.

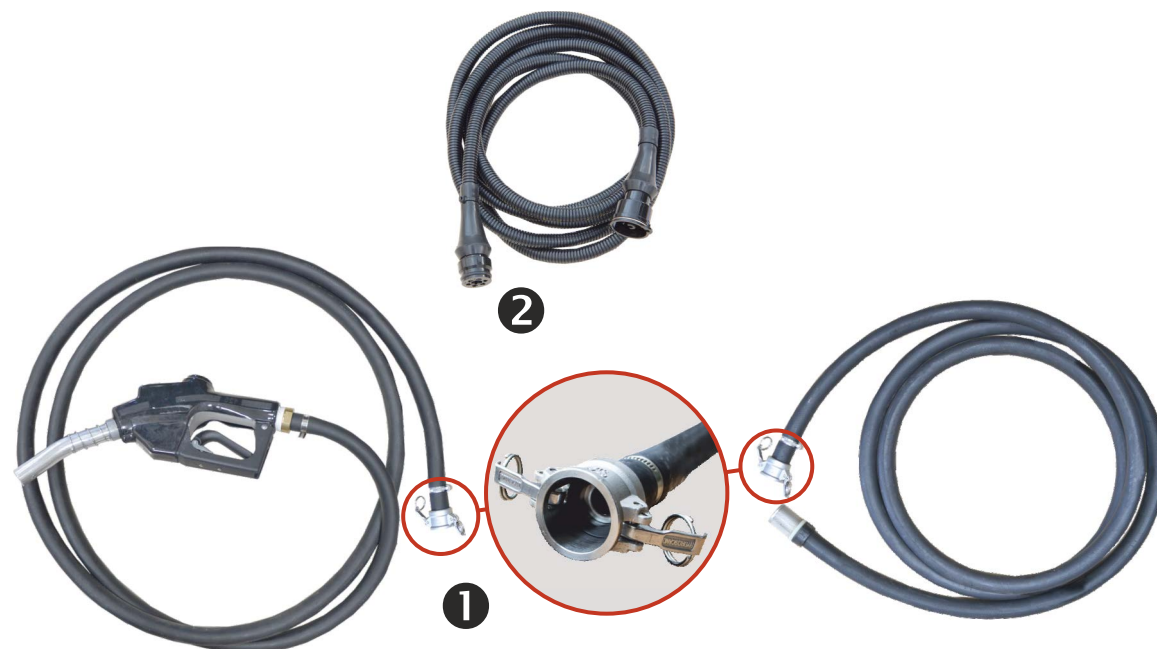
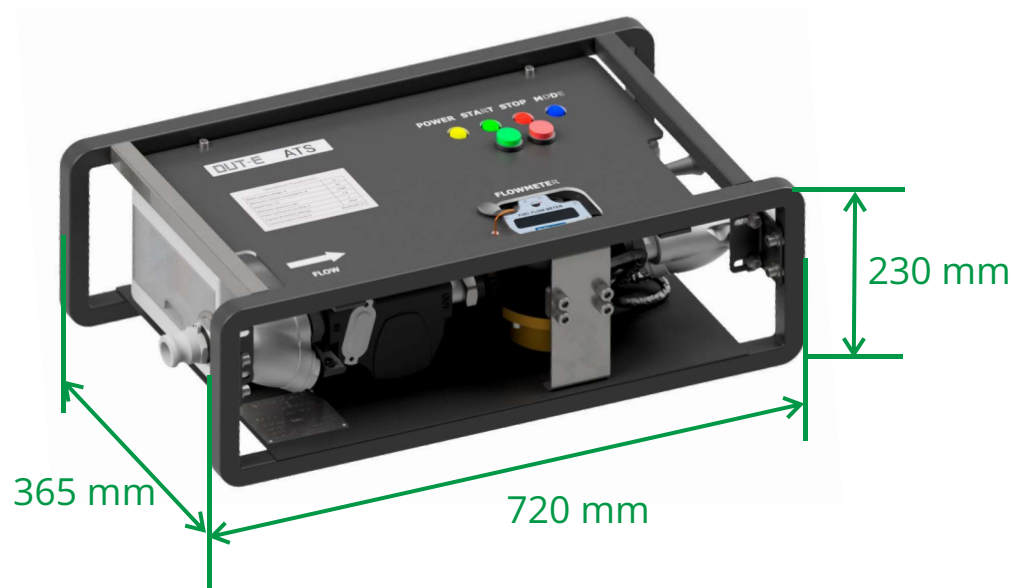


# Specifications

Working fluid .....	diesel fuel
Nominal supply voltage .....	220/110 V
Relative calibration error .....	not more than 0,5% of tank volume
Rated pumping speed .....	3500 l/h
Maximum hydraulic pressure .....	1,5 bar
Maximum number of simultaneously connected sensors .....	5

## DUT-E DUT-E ATS automatic tank calibration station

# Dimensions and package contents



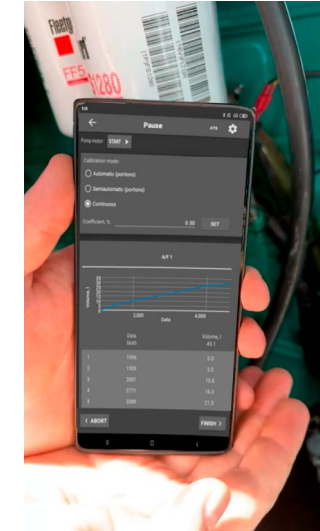
Total station weight: 23–27 kg. Included in package:

- 1 suction and dispensing hoses with a nozzle, both equipped with quick-connect fittings,
- 2 fuel level sensor cable extension (3 meters).

## Case



The fuel tank of a truck (left)  
and fuel storage tanks for diesel generators (right)



Tank calibration data  
on a smartphone

**Client:** a monitoring systems integrator company from South Africa.

**Equipment:** fuel tanks of vehicles and stationary units ranging from 100 to 5,000 liters.

**Result:** ATS reduces tank calibration time by an average of three times. The integrator can perform several times more installations with the same number of staff.

## Summary

- ✓ DUT-E ATS station accelerates the calibration process 4–6 times compared to conventional methods. The installer's work efficiency increases significantly.
- ✓ Calibration error does not exceed 0.5% of the tank volume, and the human factor does not affect calibration accuracy.
- ✓ Calibration is controlled via Bluetooth using a smartphone or tablet.
- ✓ DUT-E ATS works with analog and digital wired fuel level sensors from various manufacturers, as well as BLE sensors DUT-E S7.
- ✓ DUT-E ATS package includes all necessary hoses and cables for operation.

**DUT-E** DUT-E ATS automatic tank calibration station



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