MECHATRONICS

The advantages of the fuel level sensor

eurosens Dominator

Main concept : All Eurosens Dominator fuel level sensors are designed to minimise the cost to the end customer and the integrator of operating them over a long period of time.

1. **The sensor is mounted to the tank not directly with self-tapping screws into the metal, but through an intermediate bayonet plate (Fig. 1).**

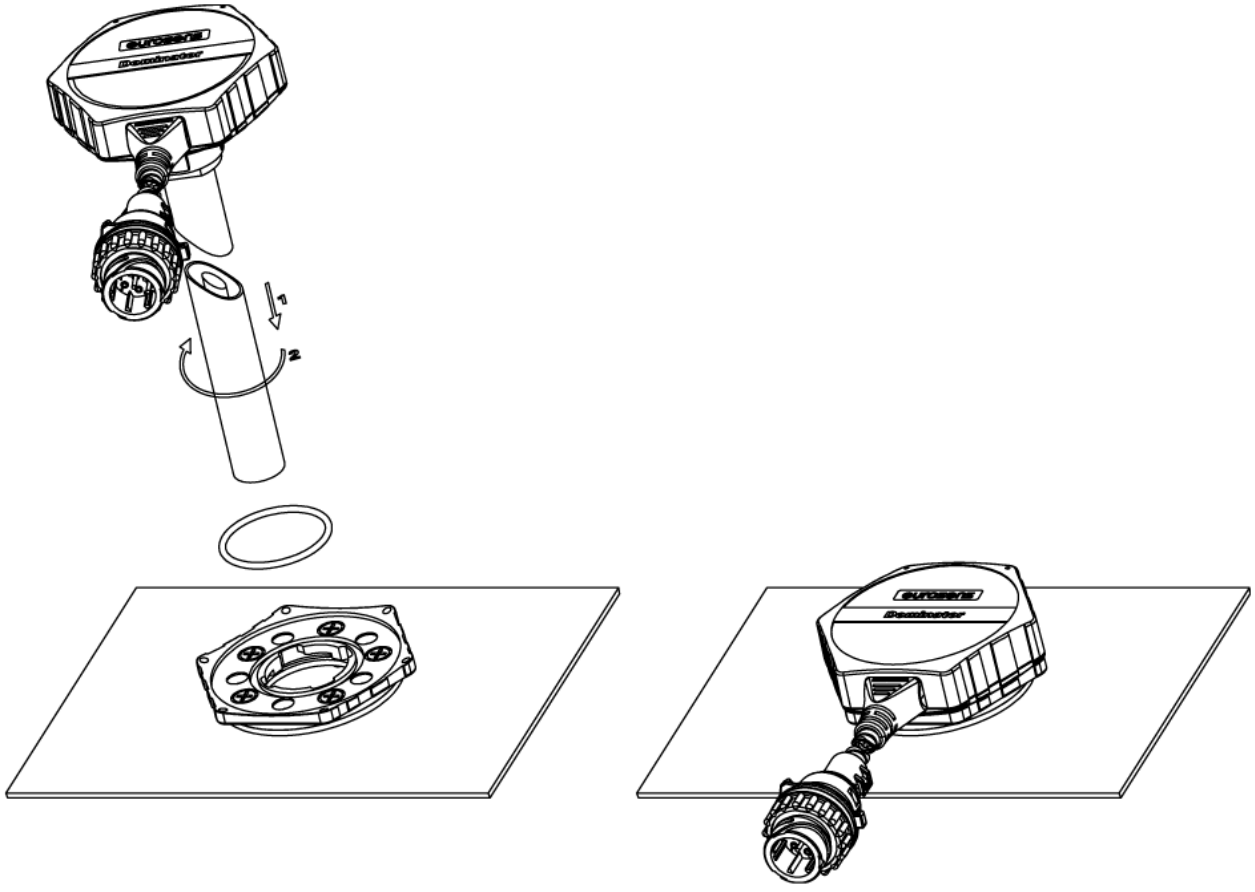


Fig. 1

How it helps:

1.1 The sensor can be removed and reinstalled without unscrewing the screws from the tank. For example, for calibration or electrode cleaning.

1.2 Easier to diagnose without the need for a specialist visit.

1.3 Installation and removal of the sensor does not weaken the strenghtness of the fuel tank.

2. The electrodes are also modular and can be easily dismantled (Fig.2).

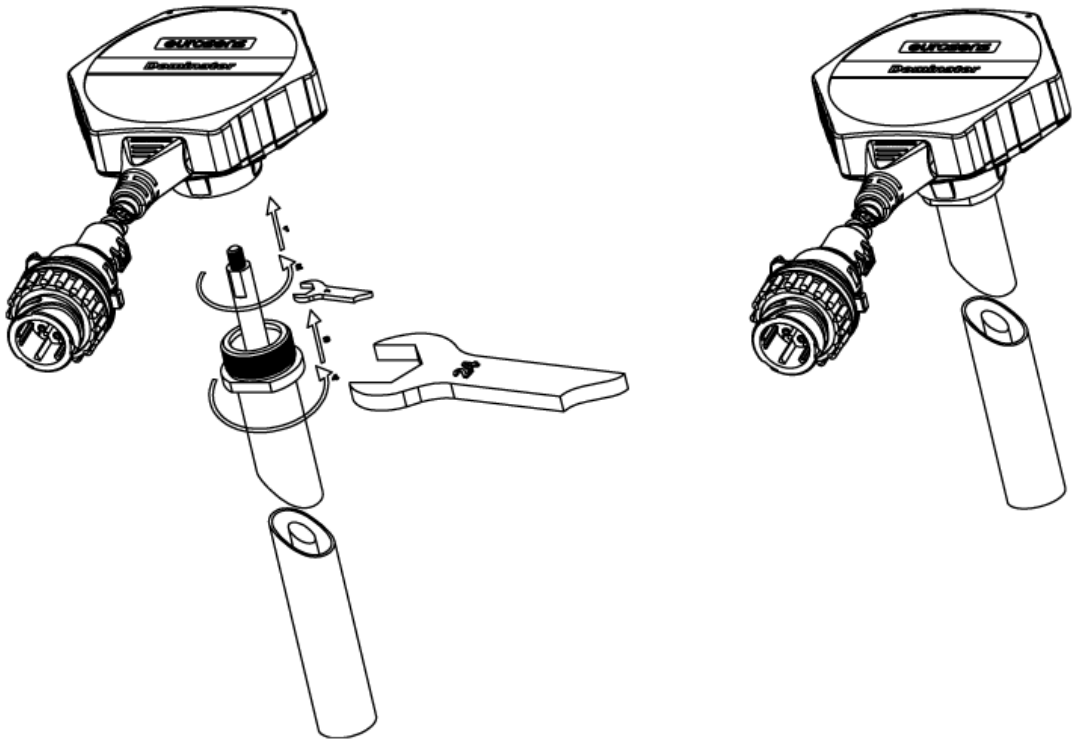


Fig. 2. Both the outer and inner electrode have a threaded connection with sensor head module

How it helps:

2.1 We can always re-install the sensors on other equipment by purchasing a longer electrode if necessary (only 20% of the cost of the sensor).

2.2 The electrodes are easy to clean from the inside, which is very difficult in sensors of traditional design.

2.3 When replacing the electronic module, the old electrodes can be used and the tank does not need to be re-calibrated.

Thus, the modular design of the Eurosens Dominator in steps 1-2 offers the following advantages:

- It is easier to diagnose, clean, and perform modular replacement by local staff without the need for sending a professional in a long service voyage.
- The modular design (sensor + electrodes) saves inventory costs on purchasing new sensors and maintaining a reserve.

3. Important tools of sensor configurator

3.1 Tools for calibration of large tanks (cisterns) , using existing calibration tables (example in Fig. 3.1).

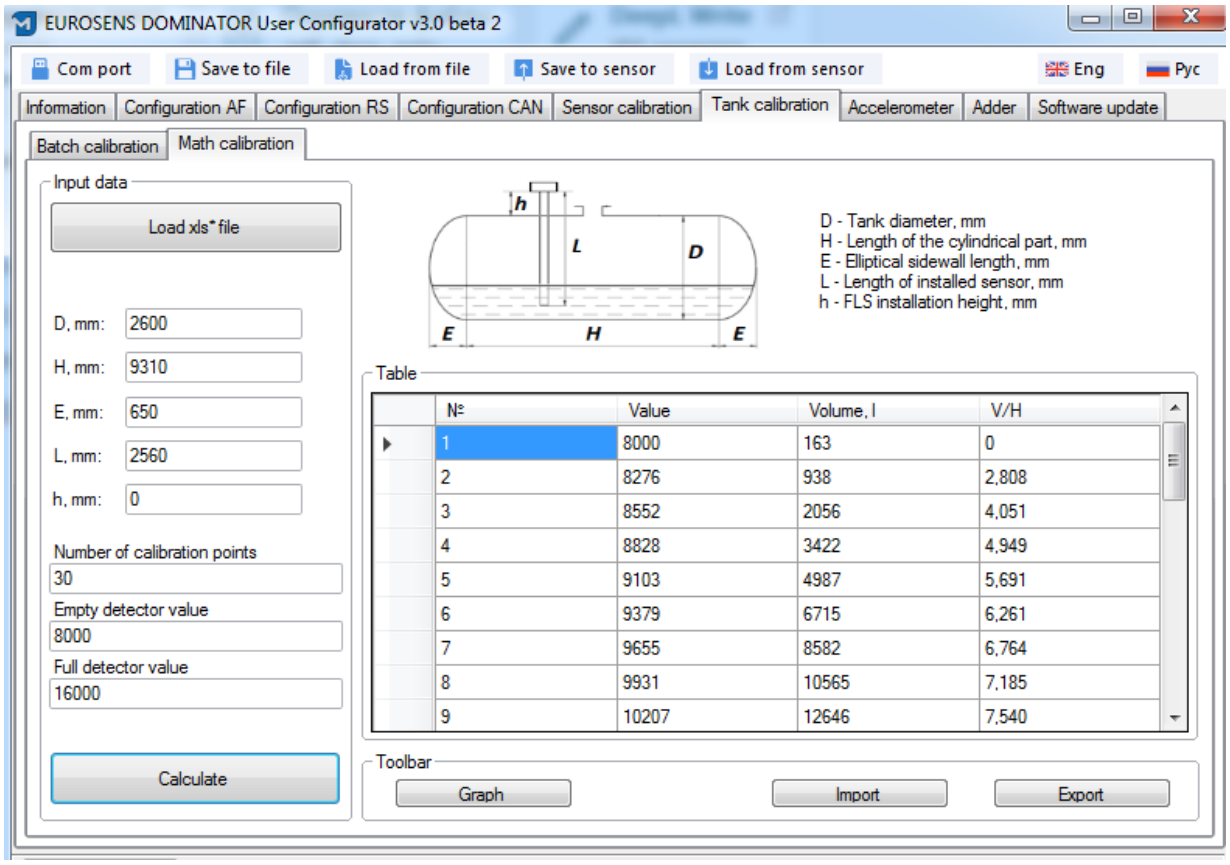


Fig. 3.1. Cistern calibration calculator

3.2 Tools for analysing calibration results.

Configurator tools allow to easily find errors in calibration curves, compare them with each other, and correctly transfer the results of fuel tanks calibration. There is no need to make full calibration of dozens of identical tanks (Fig. 3.2).

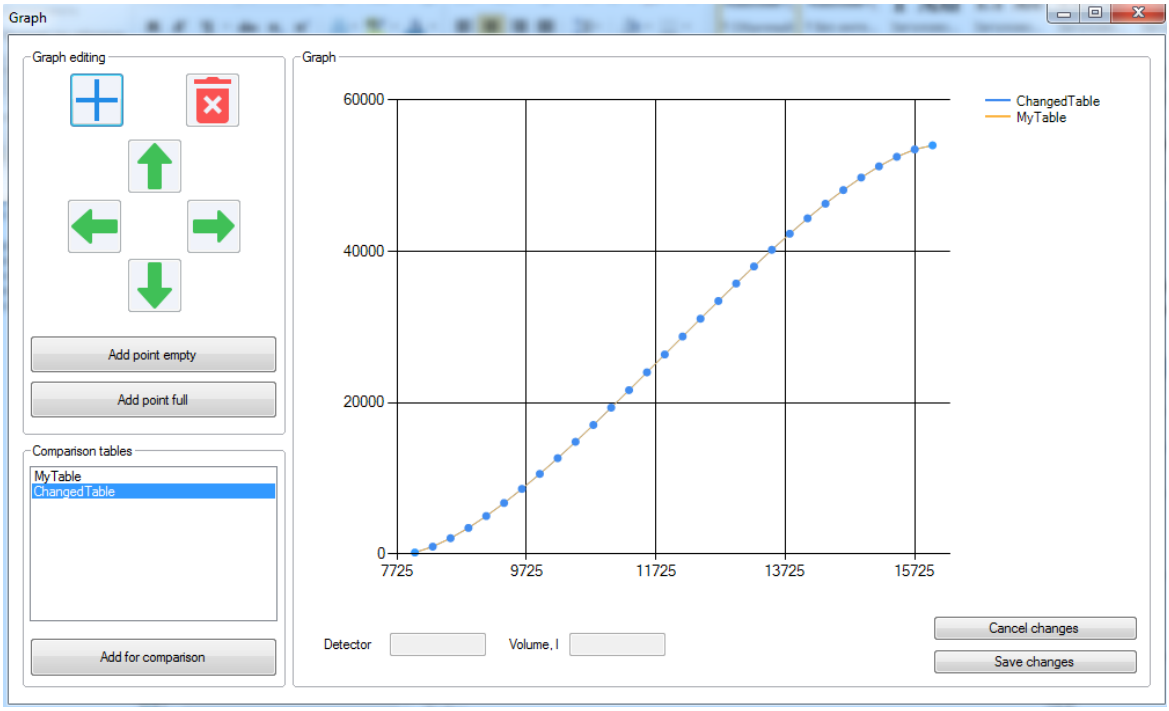
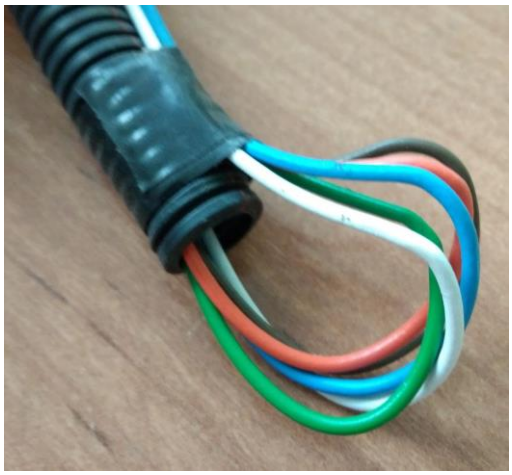
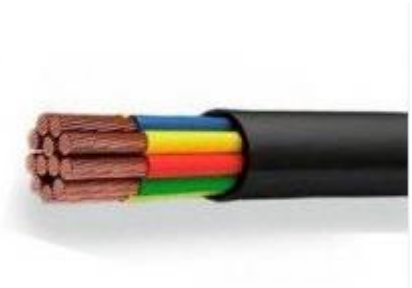


Fig. 3.2 Tank calibration editor

4. High quality cables made in accordance with automotive requirements.



A conventional fuel level sensor cable contains individual wires lying loosely in a corrugated tube.



Cables of all Eurosens sensors are labelled KGVVAM type. KGVVVAM automotive cables are designed for connection of electrical equipment to the DC electrical network of cars with rated voltage up to 28V.
By request we can put these cables in a corrugated tube for extra protection.

5. Long battery life.

For Eurosens Dominator BT (BLE) wireless sensors - the magnetic settings activation key allows significant battery savings during storage and operation of the sensor.

6. Reliable battery connection and easy replacement.

For Eurosens Dominator BT wireless sensors - we do NOT use a spring battery holder, which allows easy battery replacement but is unreliable due to vibration and oxidation. If you need to change the battery in the field, modular Eurosens allows us to replace sensor head module and replace the battery later in an office environment using a soldering procedure and coated with a reliable insulating compound. This is the only way to provide reliable power to a wireless sensor for many years. Therefore, you can forget about the well-known practice of replacing the battery after 2-3 years.

7. Wide range of interfaces.

RS485, CAN, Bluetooth, voltage, frequency, digital alarm output.

8. A wide range of accessories

is available for Eurosens Dominator sensors: gaskets, plugs, protective covers, Eurosens cable system with tees and cables of any length, intrinsic safety barrier, Eurosens displays.

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