

Aquametro Oil & Marine Fuel Metering



REAL TIME FUEL



FUEL CONSUMPTION RATE



Aquametro Oil & Marine Mission



Aquametro Oil & Marine is the world's leading manufacturer and supplier of volumetric diesel fuel metering and optimization solutions for construction and mining equipment, diesel engines and generator sets, diesel-electric locomotives, agricultural equipment and marine/river ships.

The Aquametro Oil & Marine product line consists of more than 100 different fuel meters, especially designed for tractors, trucks, graders, excavators, scrapers and other heavy machinery used in the construction, mining and forestry industries.

Aquametro Oil & Marine fuel meters are the right choice.

Aquametro Oil & Marine Products and Solutions



Aquametro Oil & Marine's fuel meters and fuel management solutions are purpose-built to operate in demanding environments, providing accurate and dependable fuel consumption data even in the most challenging applications. Each Aquametro Oil & Marine product is:

- ✓ Mechanical shock tested up to 30g
- ✓ Vibration tested up to 4g to all 3 axis under constant vibration
- ✓ Tested against electrical emissions and immissions (vehicle industry standard)
- ✓ Useable for diesel fuel with temperature of -30°C to $+80^{\circ}\text{C}$
- ✓ Ambient temperatures of -40°C to $+125^{\circ}\text{C}$
- ✓ High protection class of IP66
- ✓ Rugged design of flow meter and housing



Aquametro Oil & Marine Fuel Metering



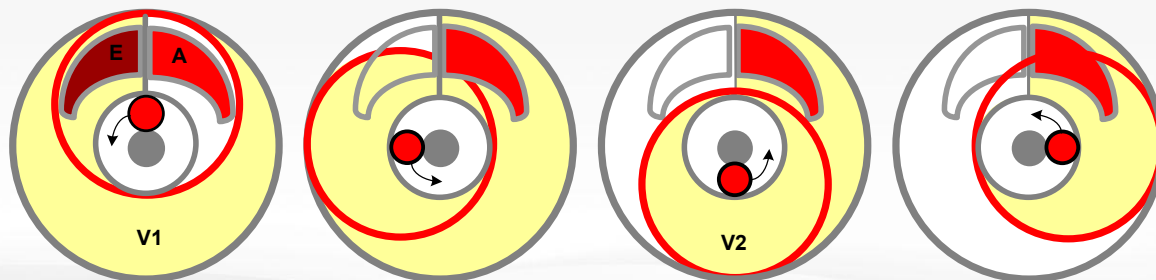
The increasing cost of fuel and the growing need to reduce fuel-related losses have made accurate and reliable fuel metering essential. Effective fuel monitoring helps prevent fuel theft, promotes more efficient driving habits, and provides detailed insight into vehicle usage and trip performance.

Accurate diesel fuel consumption data provides valuable feedback by enabling:

- detection of potential fuel theft
- reduced fuel consumption through improved driving behaviour
- real time monitoring of fuel usage
- enhanced vehicle performance
- lower vehicle emissions
- better operational control and performance reporting

By implementing accurate fuel metering, fuel consumption savings of **6–16%** can typically be achieved.

Aquametro Oil & Marine Function Principle



Function:

The ring piston carries out a rotational movement within the flow meter chamber. Due to the excentric movement of the piston, the space within the ring and outer space between the wall of the flow meter is filled through the inlet opening E. After the filling sequence, the fuel is emptied through the outlet opening A.

The movement of the ring piston is recorded by means of electronic sensors. One rotation of the flow meter corresponds to a defined flow rate.

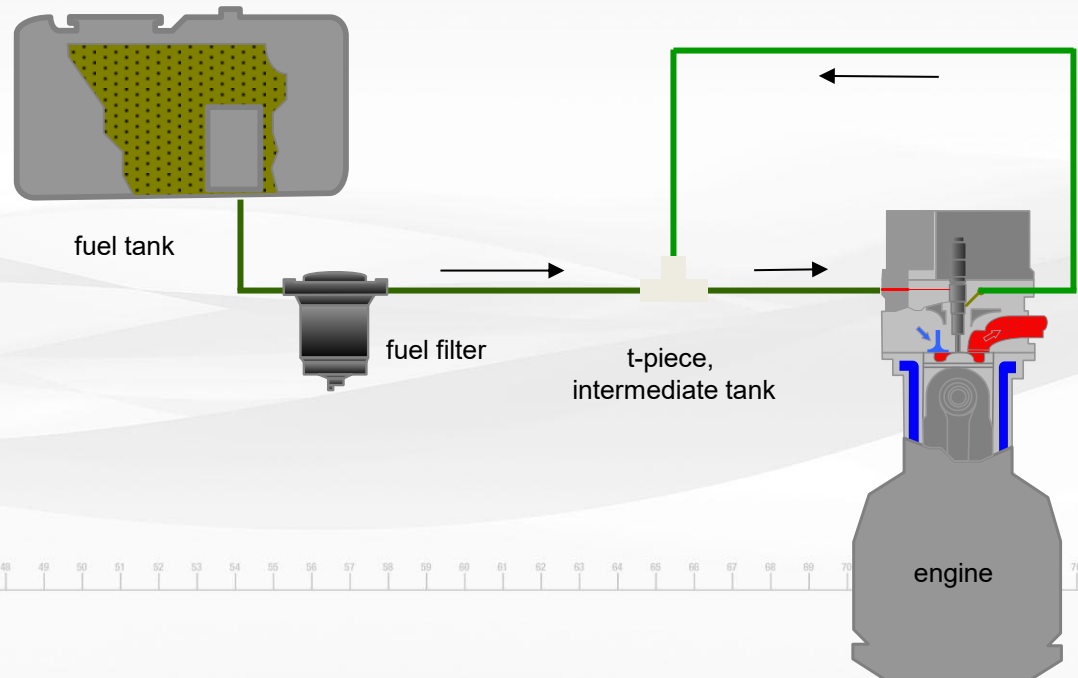
In the case of DFM 8 D, two flow meters are combined into one unit. By means of the first flow meter (V), the fuel is metered, i.e., the fuel that is delivered from the tank to the motor. By means of the second flow meter (R), the fuel return is metered; fuel return is excess fuel which is not required by the motor and thus flows back into the tank.

Aquametro Oil & Marine Fuel Schemes



Direct measurement:

Fuel supply coming from the fuel tank is directed to the engine. Excessive fuel flows back to the supply line via a t-piece or intermediate tank.

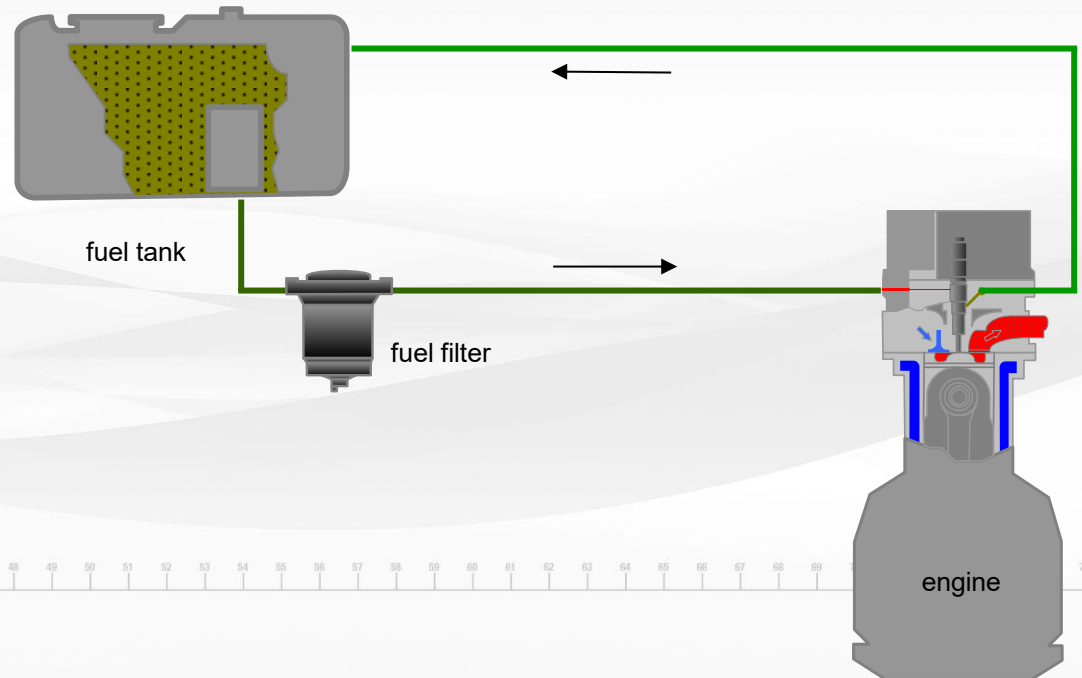


Aquametro Oil & Marine Fuel Schemes

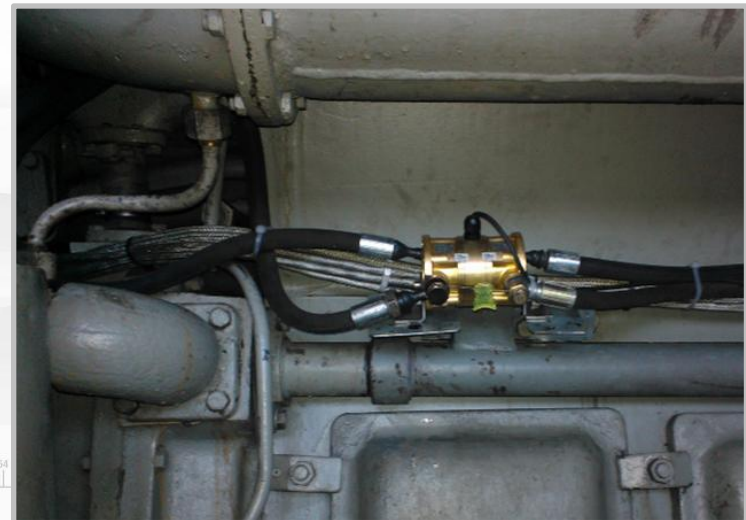


Differential measurement:

Fuel supply coming from the fuel tank is directed to the engine. Excessive fuel flows back to the tank.



Aquametro Oil & Marine Rail



Aquametro Oil & Marine Rail



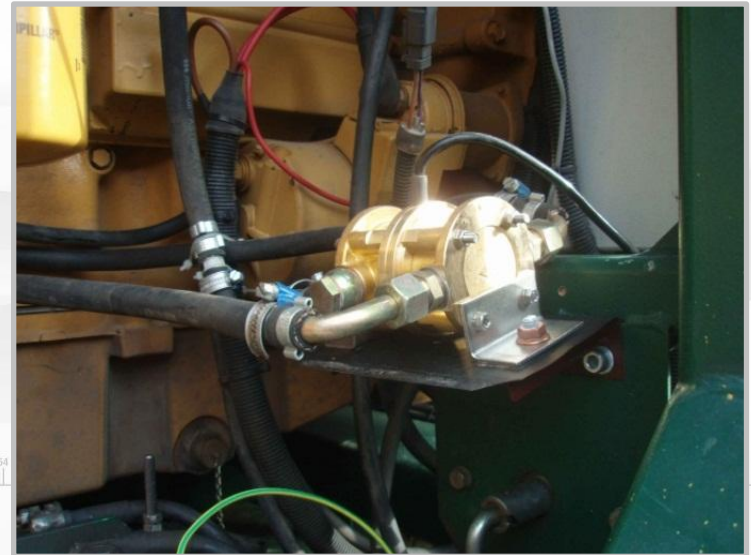
Aquametro Oil & Marine Inland Navigation



Aquametro Oil & Marine Inland Navigation



Aquametro Oil & Marine Mining and Construction



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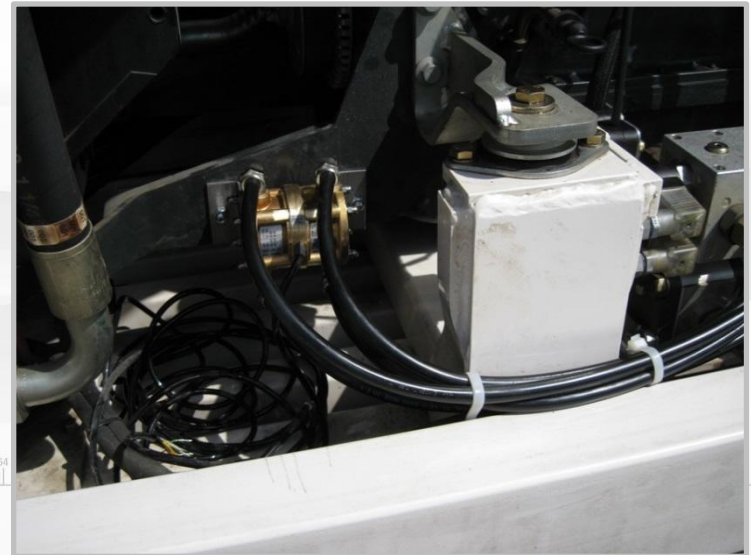


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Aquametro Oil & Marine Mining and Construction



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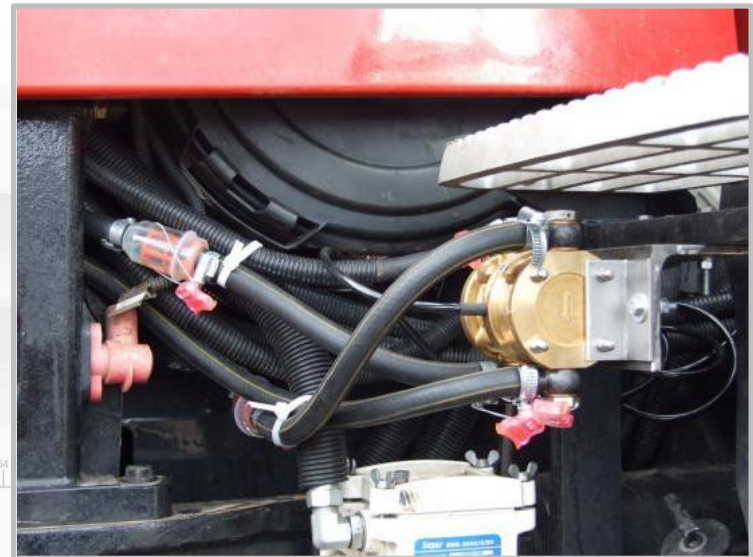
Aquametro Oil & Marine Agriculture



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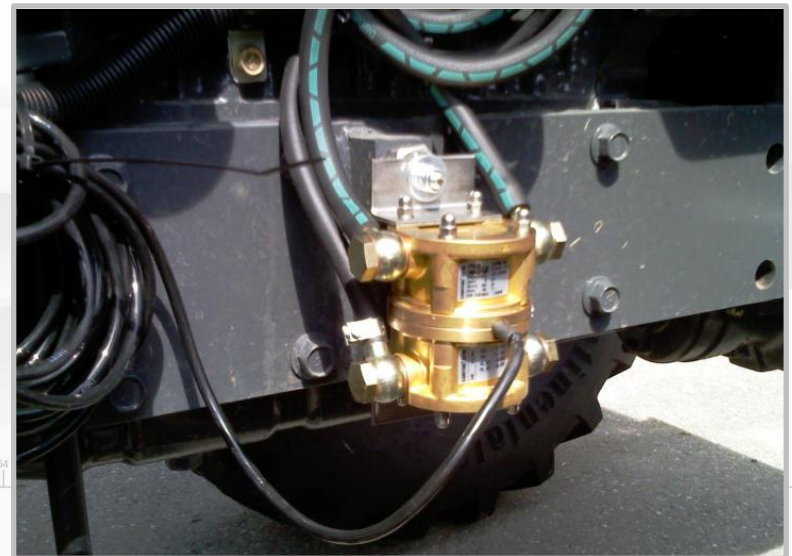
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Aquametro Oil & Marine Agriculture



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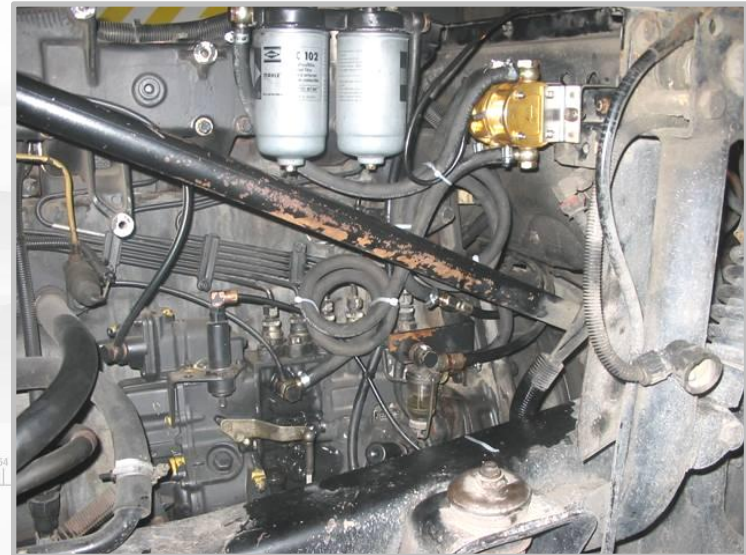
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Aquametro Oil & Marine Diesel Gensets



Aquametro Oil & Marine Road Transport



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