

# Diesel Fuel Consumption

## Control it, reduce it and save!

**The DFM-System can help you to save money on trucks and buses, construction and agricultural machinery as well as on riverboats or diesel locomotives**

- Exact measurement of consumption, leading to optimisation of operating costs, can produce savings of up to 20 %
- Accurate measurement provides real basis for analysis and subsequent action
- Sharpen awareness for an economical vehicle operation
- Discover and avoid theft of diesel fuel
- Prevent loss or waste of diesel fuel



### Advantages

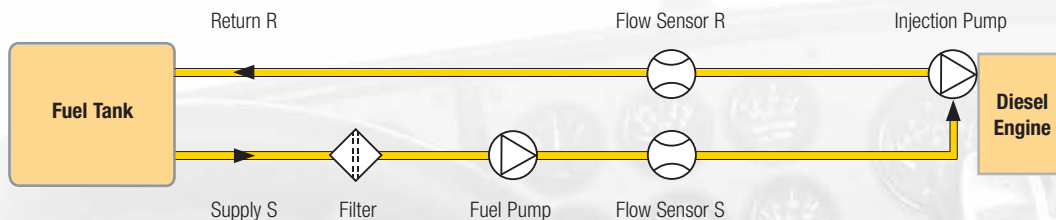
- Quick and easy installation in vehicles of every type
- Supports most used models too
- Only short down-time (OFF-operation) period
- Proved and tested system
- Easy and accurate reading of engine fuel consumption
- No extra maintenance necessary
- Tamper-proof measurement

### Affordable

- Low installation costs
- Quick and easy installation
- Short down-time of vehicle only
- Quick pay-back period

# Measuring Principle of engine fuel consumption

Diesel engines are generally operated with a circulating fuel supply system. The supply line feeds the fuel from the tank through a fuel filter and a fuel-feeding pump to the high-pressure fuel injection pump on the engine. The supply quantity is always larger than the maximum engine consumption. The excessive fuel flows back through the return line into the tank. The engine consumption corresponds to the supply volume minus return volume.



## Trucks and Buses

For easy installation a double sensor DFM-8D is the most common used. For installation with very tight space there are single sensors DFM-8S available as well.

## Construction and Agricultural Machinery, Diesel Locomotives, River Boats and stationary diesel engines

A pair of single sensors for higher engine power (with higher circulation flow rates) is used, such as DFM-20S, DFM-25S, etc.. The Diesel Fuel Measuring System DFM gives you the opportunity to measure the real engine consumption. By measuring the inlet and outlet of the engine it may prove if any fuel is used for other reason. DFM sensors are volumetric flow meters with a high accuracy. They are connected to a Board Computer DFM-BC, which is calculating all relevant values from the supply and the return line and displaying the real engine consumption.

### Your savings / Example for Trucks

Below are examples on how easy you can calculate what this system is worth in money to you:

#### Operating Data of Vehicle (Examples)

|                                  |        |        |                |         |
|----------------------------------|--------|--------|----------------|---------|
| km per day                       | 200    | 200    | <b>500</b>     | 750     |
| Consumption in litres per 100 km | 30     | 30     | <b>30</b>      | 30      |
| Operation days per year          | 250    | 250    | <b>250</b>     | 250     |
| Operation km per year            | 50'000 | 50'000 | <b>125'000</b> | 187'500 |
| Consumption in litres per year   | 15'000 | 15'000 | <b>37'500</b>  | 56'250  |

#### Influence of Fuel Price

|   |        |        |               |        |
|---|--------|--------|---------------|--------|
| Fuel price per litre in EURO (assumption) | 1.00   | 1.00   | <b>1.00</b>   | 1.00   |
| Fuel cost per year in EURO                | 15'000 | 15'000 | <b>37'500</b> | 56'250 |

#### Return on Investment

|  |       |       |              |       |
|--|-------|-------|--------------|-------|
| Complete investment cost in EURO (example) <sup>1)</sup> | 1'400 | 1'400 | <b>1'400</b> | 1'400 |
| Estimated reduction of fuel cost                         | 20 %  | 15 %  | <b>10 %</b>  | 5 %   |
| Savings of fuel cost per year in EURO                    | 3'000 | 2'250 | <b>3'750</b> | 2'810 |
| Pay back time in months                                  | 5.6   | 7.5   | <b>4.5</b>   | 6.0   |
| Money you would save in the first 12 month               | 1'600 | 850   | <b>2'350</b> | 1'410 |

<sup>1)</sup> Complete investment cost may vary from country to country due to local situations. They shall include flow sensors, board computer, all transport and import cost, installation and start up of system.

Take the example from the 3rd column: With above vehicle operating data and 10 % estimated reduction of fuel cost, the investment has paid back its costs after only 4-5 months! From then on you make extra cash month by month! Since the figures are different in each area, they have to be adapted to individual values.

**Ask your authorized dealer for a personal assessment. He will calculate your possible money saving based on your vehicle data, the operating conditions and the local cost situation.**

## Installation

Installation has to be made exclusively through an authorized dealer who is familiar with your vehicle and trained for the DFM measuring system.

DISTRIBUTOR:

HEAD OFFICE:

**AQUAMETRO AG**  
 Ringstrasse 75  
 CH-4106 Therwil  
 Phone +41 61 725 11 22  
 Fax +41 61 725 15 95  
 info@aquametro.com

