

# Electronic Fuel Delivery System



## EFDS

Improve fuel efficiency with accurate replenishment management



**Automatic Vehicle Identification (AVI)**

**Fueling Record Visibility**

**Operation Time Monitoring**

**Vehicle and Equipment Utilization**

**Total Fuel Delivery Management Solution**



# HOW IT WORKS

## 1 Vehicle Identification

Easily identify specific vehicle by choosing its ID using a PDA. LED light on the ID-Tag lights up as response.



## 2 Fueling Management

Operator controls fuel injection using PDA's "start/stop" button.

The ES-Box obtains filled volume from flow meter on oil truck and records the start- and end-time of the fueling process.

Total fueling data is sent to PDA for cross-checking .

### ES-Box

Connected to flow meter of oil tank



### Instant Ticket Issue

On-site printing of delivery tickets improves billing accuracy.



## 3 Operation Time Monitoring

The Operation Timer collects operation time data by communicating with the connected fuse box. The data will be synchronized with PDA automatically.

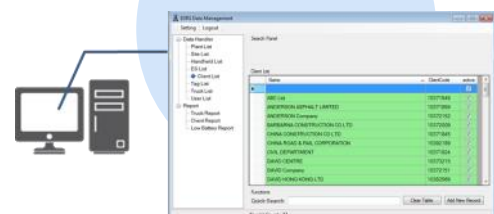


## 4 Fuel Efficiency Analysis and Reporting

A single Cradle inputs all PDAs' stored data to FuelData360. Managers and head office can overview whole site operation and generate fuel efficiency reports for future planning.

### FuelData360

Analytical software and database



# TOTAL FUEL DELIVERY MANAGEMENT SOLUTION

Increasing demands being placed on the **accurate monitoring of vehicle refueling and fuel expenses** can no longer be met solely and easily by traditional manual practices. Above and beyond this, industrial consumers expect to receive precise records of their fuel consumption for efficiency analysis.

## AVI, Automatic Vehicle Identification

ID-Tag gives an unique ID number to each civil work machine, construction vehicles and site equipment, allowing easy identification by managers and workers with a PDA (Handheld RFID Reader).

## Fuel Meter Data Validation

By synchronizing the PDA with the ES-Box, inspectors can cross check and validate fueling data by time, by vehicle or by contractor company.

Data accuracy is guaranteed and management is improved.

## Operation Time Recording

The Operation Timer records working hours of vehicles and machines for better monitoring. Machinery malfunction or fuel inefficiency can be detected and handled immediately.

## Wireless Data Transfer & Consolidation

All captured data can be instantly communicated via RFID or Bluetooth in between PDAs and central computer. Management can consolidate and overview the entire data net over the whole site, or even over different sites.

## Fuel Efficiency Analysis and Report

FuelData360, a PC based software, empowers easy, reliable and effective data management and analysis. Comprehensive reports can be generated to help manage fuel efficiency and improve your ROI.

## On-site Consumption-based Ticketing

EFDS allows you to calculate fuel expenses at anytime and to print and issue fueling tickets at anywhere with our portable Bluetooth Printers.

Manual errors and data incompleteness can be avoided.



# FEATURES

- ✓ Durable 2.4 GHz Active RFID ID-Tag with responsive LED
- ✓ PDA as a portable reader, which identifies ID-Tags, synchronizes data with ES-Boxes and reads Operation Timer
- ✓ Highly compatible ES-Box works well with commonly-used oil meters\* for data validation
- ✓ Operation Timer is small and with simple installation steps
- ✓ Analytical software FuelData360 with user-friendly interface
- ✓ On-site technical support for system installation
- ✓ Project-base maintenance support
- ✓ Software updates and staff training workshops
- ✓ User Manual and Demonstration Video

\* Veeder-Root's EMR3 & Lectro Control's LCR-II

# BENEFITS

- \* Free site managers and workers from manual record and control errors with computerized system
- \* Eliminate repeated efforts in checking data consistency
- \* Monitor operation efficiency of all vehicles and machines
- \* Access comprehensive information about fueling expenses and vehicle operation time
- \* Print and file fuel tickets on-site
- \* Perform extensive data comparison and analysis
- \* Study fuel usage and efficiency to improve ROI
- \* Export data or report in excel format for further filing or reporting



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