





Our Philosophy

We provide data driven, web-based soft- and hardware solutions, delivering continuous development in close cooperation with our customers.

All data collected is your data. Thats why data exports are essential part of the system.



SDB*net* – Shared Data Base

The modern web-based soft- and hardware SDBnet platform was developed to exchange data between non stationary vessels and an centralized stationary data base at shore.

Data are manually reported by the vessel crew and optionally collected by additional hardware components directly from available sensors on board. The collected information is transmitted to shore side and processed by the office system where it is being displayed for further analysis.

Monitoring modules for full ship performance, shaft power, trim/list, fuel consumption as wall the electrical energy are available.







PMS*net* – Performance Monitoring - Reporting

Implementing our **PMS***net* high-end reporting system will reduce friction and delays communicating speed and fuel consumptions with your fleet, providing data frequently and without data inconsistencies (due to formatting or minor input mistakes).

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The reporting is broken down into two categories. The event based reporting covers the daily business routines also known as noon-reporting. Additional ad-hoc reports document processes like bunkering, sludge disposal and scheduling.





PMS*net* – Performance Monitoring - Online

Requiring only a few data collector units, the **PMS***net* online system is able to collect all essential sensor data. The data collector setup is designed for easy installation and low maintenance.

Fuel oil consumption, shaft power, trim/list and certain nautical data points are collected frequently (minimum 1/sec). 15 minutes average values will be logged and transmitted to shore, the logged data can be viewed by both office and vessel.

Live values are available on board and can be viewed using the Performance Dashboard.





Typical data collector setups are:

Setup I

- BRIDGEcollect to collect the nautical data
- FMDnet to collect the fuel oil consumption data
- TLDnet to collect trim/list
- SPMnet to measure the true shaft power

Setup II

- BRIDGEcollect to collect the nautical data
- ECRcollect to collect the shaft power and trim/list
- FMCcollect to collect the fuel oil consumption data





EMS*net* – Electrical Energy Monitoring - Online

Energy monitoring is increasingly an important source of information for energy optimization and for reducing operating costs.

In order to process a high number of signals, **EMS***net* provides modular components keeping installation cost down. Integrating all suppliers and consumers providing a comprehensive view of energy flow and distribution as utilized by your vessel.





Typical groups are:

- SUPPLY collect to collect shore and auxiliary engines power
- **REEFER***collect* to collect reefer consumption
- **VENT***collect* to collect E/R and cargo hold venting consumption
- **PUMP***collect* to collect pumps for circ. oil, ballast water, ...



SPM*net* – Shaft Power Meter

The Shaft Power Meter is the only system to measure propulsion power directly.

SPM*net* with more than 20 years experience guarantees a reliable measurement of shaft rpm, torque and power.

Measured values can then be used to evaluate ship speed and fuel consumption in relation to main engine rpm and power output.







Bridge Display (optionally)





Engine Room

Shaft Unit





TLD*net* – Trim/List Display Unit

The correct trim will reduce the ship resistance and bring the bulbous bow under water.

Existing trim estimates based on the draft system lack accuracy due to hydrodynamic influences. Using designated sensors like **TLD***net* will result in true trim, with almost zero external effects reducing precision.

The **TLD***net* Trim/List Display Unit turns measurements into an accessible data source for daily use and can be installed anywhere on the vessel (i.e. the bridge or engine control room).





Bridge Display (optionally)

Bridge





FMD*net* – Flow Meter Display Unit

FMD*net* collects and displays the fuel consumption of the M/E, A/E, Boiler and Cylinder Oil.

Different combinations and types of volumetric and mass flow meters can be connected and processed by **FMD***net*. The display unit is installed in the engine control room to simplify the access to all counter readings.







COR*net* – Coriolis Mass Flow Meter

COR*net* provides reliable data by using low maintenance coriolis flow meters from out partner KEM/TRICOR.

The coriolis flow meters provide accurate mass flow, density and temperature measurement. No moving parts reduce the possibility of mechanical failures.

In combination with the **PMS***net* the flow meter configuration can be validated and modified from shore (without expensive onboard service).





Prepared for ISO 19030 Hull and Propeller Performance

- Data collection
- Data processing
- Data backup
- Additionally transmission of data to shore



Typical milestones of an implementation

- Collecting all technical data approx. 6 weeks
- Setup the vessel/office software approx. 2 weeks
- Delivery of the SDBnet servers typical delivery time 3 weeks
- On-board installation by the crew
- Training of the crew and shore inspection/chartering
- Data investigation after 2-3 month and give feedback to crew to increase the data quality
- Investigation and detail interface analysis for the implementation of the online monitoring system
- Implementation of the monitoring system

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