

# Trim Optimization Module

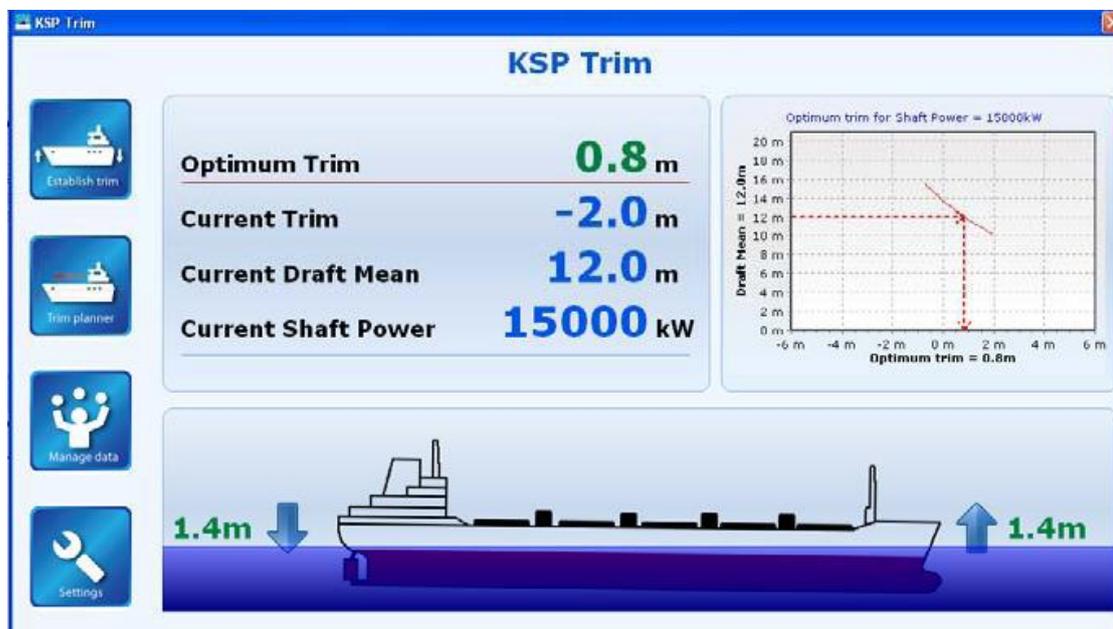
## Kyma Ship Performance

KSP Trim is an optional software module that can be integrated with the standard KSP system.

The purpose of the KSP Trim module is to provide the vessel operator with a practical tool for establishing the optimum trim for the vessel at any load and draft condition.

Optimum trim is defined as the trim where a vessel will have the best speed through the water at a given draft and load and is, accordingly, an extremely important parameter with regard to vessel overall efficiency and fuel consumption.

The optimum trim is related to the physical hull design, and will be the same for identical vessels at equal operating conditions.



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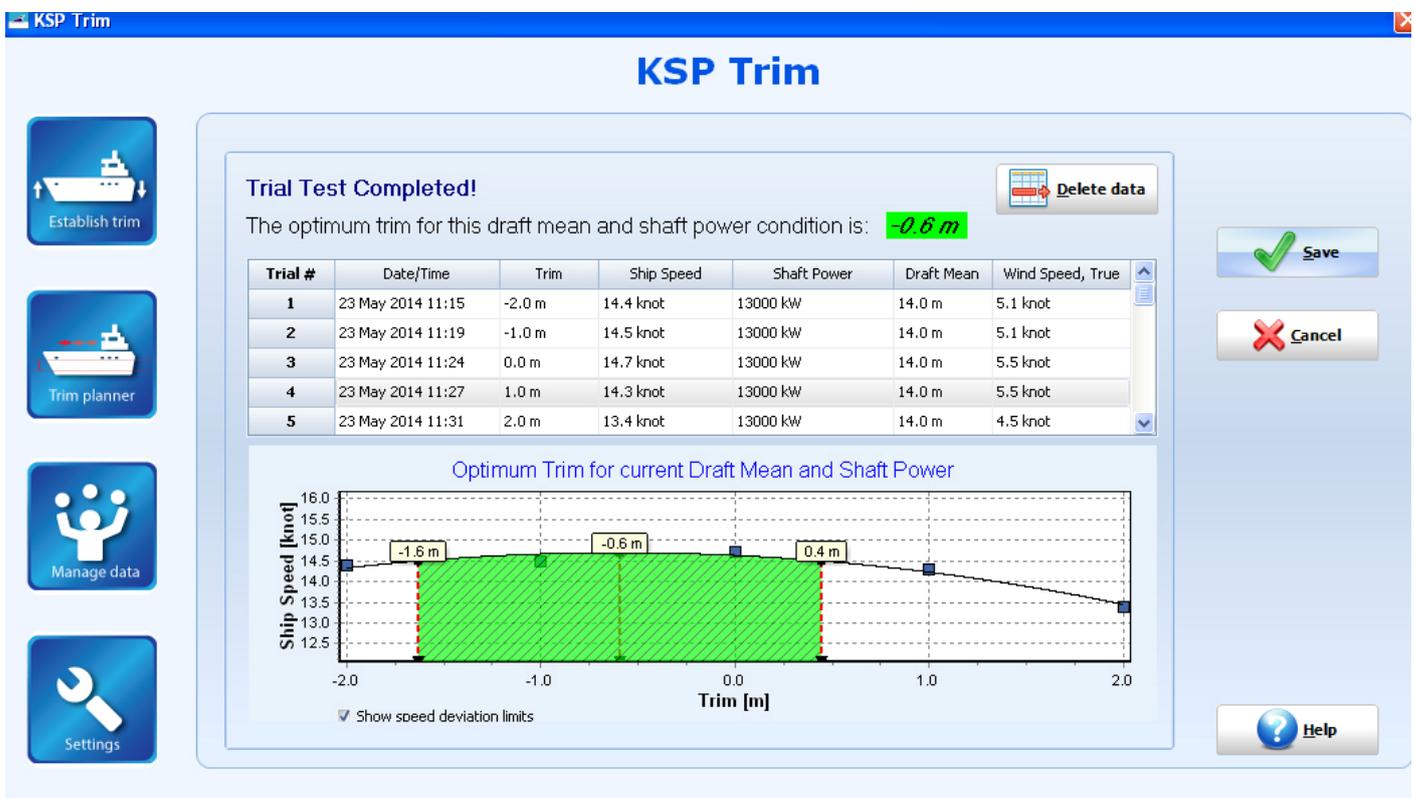
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# Establish Trim

The principle applied for establishing optimum trim by the KSP Trim module is to use the KSP system's capabilities for data logging and report generation to carry out a series of trials at various loads and drafts.

Each series of trials will find the optimum trim level for the current power and draft. This is done by performing runs at various angles of trim whilst keeping the shaft power and mean draft constant. During each run, the vessel speed through water is recorded in order to determine which trim level gives the highest vessel speed.

The summarized results of each run are added to the table as they are completed. When all the trials are complete, the results of the trial series are evaluated, as shown in table below:



## Trim planner

When the optimal trim has been established, the system can be used as a 'Trim Planner'. The desired shaft power and mean draft values are entered in the 'Trim Planner' and the optimal trim at this condition will be displayed.

## Manage data

All data from each series of trials is stored in the system and can easily be accessed at any time. The optimum trim database can be exported to be used for sister vessels within the same class.