

SteerMasterTM
Control System

The **SteerMaster Control System** is the first network-based combination of a manual main steering system and a self-tuning adaptive heading control system.

A SteerMaster Control System comprises three cardinal components:

The **NAVIGUIDE 4000 Manual Steering System**

The **NAVIPILOT 4000 Self-Tuning Adaptive Heading Control System**

The **NAVINET 4000 Steering Control Network**

Although conceived as a combined system, the very flexible configuration and modular design features also allow the individual application of only the NAVIGUIDE 4000 or only the NAVIPILOT 4000 together with the NAVINET 4000 Steering Control Network. In this way, all customer requirements can be met with economical solutions.

SteerMaster is simple to install and can be used on vessels of all types and has ample provision for future expansion and upgrade if required. The system's unique network architecture will result in up to 25% cost saving in installation and cabling. NAVIGUIDE 4000, based on the NAVINET 4000 Steering Control Network, and NAVIPILOT 4000 have been type approved by Germanischer Lloyd.

Based on an industrial computer area network, the NAVINET 4000 Steering Control Network forms the backbone of the system, which is one of the first to implement the new US National Marine Electronics Association NMEA 2000 Data Communications Standard.

The sophisticated, state-of-the-art software design facilitates simultaneous intercommunication and switchover of multiple control units within the network system.

A flexible modular design, the NAVIGUIDE 4000 program provides all components for follow-up (FU) and non-follow-up (NFU) manual steering for single and dual rudder systems.

A basic configuration with single FU and double FU for a single rudder, comprising a FU hand wheel, an NFU tiller, a rudder angle feedback unit, a steering mode selector, a steering alarm module and a steering control unit, can be expanded considerably by simply connecting additional components to the NAVINET 4000 network.

When the Sperry Marine **SyncroHelm** technology is also included in the steering system, the NAVINET 4000 Steering Control Network synchronises automatically all FU wheels on the main bridge and bridge wings.

The NAVIPILOT 4000 Self-Tuning Adaptive Heading Control System carries out real-time adjustments for load dynamics and weather conditions. The NAVIPILOT 4000 is dynamically tuned during an adaption procedure involving short, simple initial manoeuvres before automatically and continuously refining the tuning throughout the voyage to suit the ship's behaviour with regard to load and weather conditions.

The NAVIPILOT 4000 provides manual selection of steering strategies to adapt to both weather and load conditions, whereas the automatic self-tuning capability generates fewer and smaller rudder movements resulting in lower fuel consumption and less wear and tear on the steering gear.

SteerMaster™ Control System

with

Double Follow-Up and Double Non-Follow-Up for Single Rudders Positions

