MACS3

Cargo Management System for Container Vessels
**Cargo Management**

- Stability calculation
- Longitudinal strength calculation
- Customizable user interface
- User-defined warning points
- Visualization of various vessel views
- Automatic wind pressure calculation
- Automatic ballast tank optimization
- Modular extension
- Screen and print reports

### Basic System

**Basic Program MACS3.net**

- Graphical tankplans of the vessel showing current conditions
- Optimization of trim, heel, stability and stress by ballast tanks
- Display and printout of loading conditions and calculations
- Saving and loading of loading conditions
- Online help
- Warning points (e.g. trim, draught, GM)

**BELCO**

The container management enhances the MACS3 loading computer with fast and easy container management features.

**Data Features**

- Container information: size, type, weight, port of loading/discharge, operator, etc.
- Full EDIFACT support
- UN Locode database
- Port rotation with date/time and quay
- Statistics, e.g. result table with free selection of criteria

**Cargo Handling**

- Efficient loading/discharging/modifyng and exchange of containers
- Visual editing of reefer positions and hot areas
- Loading and discharge list
- Plan- and fully functional layer view
- Hatch cover handling
- Symbolic presentation of the pier
- Result table with free selection of criteria
- Several Undo-Steps – Handling of break bulk

**Checks**

- Visibility (IMO and Panama) check with blind sectors
- Easy checking of critical conditions - all at one glance: stack weights, flying containers, reefer positions, hatch cover clearance, type, UN Locode, overdimensions, handling instructions, container numbers

**MACS3 for container vessels**

The stability and strength calculations for container vessels cover all pertinent international regulations.

The software has been approved and certified for on-board use by all major classification societies. The most comprehensive feature list sets the standard for today’s cargo planning.
Selected add-ons

**STOWAGE PLANNING** provides the import and export of ASCII-or XLS files, e.g. import from the booking computer or database. It also allows manual planning by dragging one or multiple containers from pier to a stowage plan.

**TANK ONLINE** periodically reads tank filling levels and temperatures into MACS3. It relieves the user of manually entering the values that are needed for the stability and strength calculations. Drafts, trim and heeling can also be read online and compared with the MACS3 calculations. TANK ONLINE is available for all major on-board measurement systems, connecting to over 25 different makers.

**SEALASH including lash optimization** lashess containers properly. Forces are calculated according to GL, DNV, BV, ABS and LR. Generates various reports, e.g. inventory list, lash forces by bay, stack and tier. Lashings can automatically be applied according to the Cargo Securing Manual.

**DAGO for container vessels** manages dangerous goods. It checks the fulfillment of the stowage and segregation requirements imposed by the latest IMDG Code.

**DAGO I** includes the IMDG database with the relevant information from the Code and the Emergency Schedules (EmS). Checks are done by UN Number.

**DAGO II** adds the fire-fighting and safety plans. All safety equipment is shown in deck plans, pictured by standardized symbols. The plans can be enlarged to greater detail, giving the crew quick help in locating safety equipment. In case of emergency, a report is created. All procedures and actions required by the regulations are shown, and the safety equipment to be used is highlighted visually.

**DAGO III** contains the complete Medical First Aid Guide (MFAG), including medical advice, diagnoses and all tables, in both words and illustrations. All MFAG references are linked from DAGO I via a single click.

**BALLASTMAN** the Ballast Water Exchange Module. IMO Resolution A 868 (20) contains guide lines and requirements on how to prevent the transfer of unwanted organisms. A favourable method is the exchange of ballast water in open sea, far away from shore. This module provides the means to plan and supervise the process of ballast water exchange while at the same time ensuring the steady stability and strength of the vessel. An appropriate ballast water exchange report will be generated.