



## Rauma Brattvaag™

Anchoring and mooring systems for merchant vessels

**Rauma Brattvaag electric and hydraulic anchoring and mooring systems are well proven and compact deck machinery solutions for all cargo and passenger vessels. With over 60 years of experience, Rauma Brattvaag builds high quality, thoroughly workshop tested systems in an ISO 9001 certified environment.**

**These systems conform to major international standards and meet all the rules and regulations presently in force.**

### Modular design

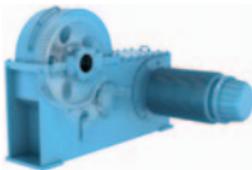
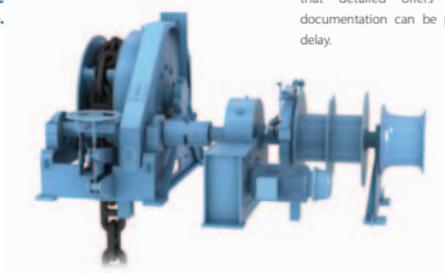
Rauma Brattvaag modular design made up of standard modules offers tailor-made solutions to suit specific customer requirements or drive preferences. Winch modules are drum, shafting with accessories, brake, bearing bracket, warping end, gear and drive. Windlass is made up of cable lifter unit, pinion shaft, clutch and brake modules.

The drum size and the main shaft line are

open design parameters to meet all customer-specific requirements for the deck layout.

Modular design concept eliminates the prototype risks often associated with traditional tailor-made one-off solutions and enables more reliable spare part supply

Use of computerized configurator enables that detailed offers with necessary documentation can be prepared without delay.



### All drive technologies

It is important that anchoring and mooring equipment can be optimized for each ship both from operational and installation point of view. There are parameters as redundancy, explosion proof requirements, silent operation, operation temperature, space etc., which may offer advantages to one drive technology compared with others.

Rauma Brattvaag can offer hydraulic deck machinery with low and high-pressure drive and electric machinery with frequency controller and pole change drive.

When all these technologies are available from one supplier, it is possible to make a neutral comparison to find optimum solution for each individual case.

## Rauma Brattvaag design features

The range of Rauma Brattvaag modular mooring winches is from 5 to 40 tonnes capacity and windlasses for up to 137 mm chain.

The gearbox is a closed construction steel fabrication arrangement with oil bath/splash-lubricated gearing.

The gear wheels and shafts are made of high quality steel and have machine-cut teeth ensuring good efficiency and quiet running of the gearing.

All shafts run on roller bearings. Mooring drums and chain wheels run on slide bearings. All bearings have grease or oil splash lubrication.

The drum brake is an external contracting band brake in two halves and fitted with brake linings of incombustible non-asbestos material. Brake joint pins and screws are made of stainless material and pins are provided with grease nipples.

Rauma Brattvaag remote control stand is of sea water resistant material, protection class IP 56. The stand contains all necessary devices, dependent on the specified scope, as control lever, indication lamps, ammeters, setting switches and stop button.



## Delivery process

Rauma Brattvaag team has control over the whole delivery process. Both mechanical and system design is our own, and any development and improvement is easy to make.

For outsourcing of components we use reliable long-term partners and due to modular design concept it is easier to maintain high quality.

In our own assembly workshops, in South Korea and Poland, the equipment is tested before the delivery.

Project managers are generally dedicated to certain areas and customers in order to anticipate their needs and enabling the handling the project to full satisfaction of all parties.

## Global and local

Rolls-Royce support provides a comprehensive capability to improve availability with lower through-life costs. An important part of this strategy is a 'global and local' approach, which includes a commitment to the local language and culture so that Rolls-Royce can work closely with all customers, wherever they are.

With offices in 24 countries, Rolls-Royce Marine offers an unequalled support capability. This international Global Support Network has a team of more than 500 personnel, of whom over 200 are service engineers.

