VAN DER VELDEN® MARINE SYSTEMS : WHEN MANOEUVRABILITY MATTERS

Rudders, steering gear and propulsion optimizers

Smart Maritime Solutions
Our competence, your comfort: the best solution
Smart Oceangoing solutions

The oceans are a harsh and unforgiving environment, and there is no substitute for installing the best equipment onboard your vessels. Our rudders and steering gear will ensure vessels stay on course and are able to smoothly manoeuvre in busy sea lanes and harbours.

With decades of experience under our belt, Van der Velden Barkemeyer has long been the first port of call for oceangoing fleet owners who recognise quality and reliability. An investment in our highly sophisticated equipment is certain to pay off as we never make compromises. Everything we manufacture reflects our unrivalled competency.

Van der Velden Barkemeyer specialises in the design, engineering and production of premium rudders and compact steering gear. All can be integrated in a complete package that is tailor-made to your vessel and its specific application.

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Welcome to a world of integrated technology
The industry original high lift BARKE® rudder

There is only one true BARKE® rudder and that is made by Van der Velden. Custom designed to your specifications, our BARKE® rudder ensures you the ultimate in manoeuvring and course-keeping. Its highly sophisticated flap design also provides maximum operational comfort.

The BARKE® rudder is the solution if you are looking to invest in today and tomorrow. The progressively operating flap linkage system is contained in a fully enclosed, grease-lubricated BARKE® housing. This results in minimum wear on the linkage components and eliminates the risk of sand entry or the problems caused by contact with floating objects or ice.

Install the original BARKE® rudder and reap the benefits for many years to come.

Other features
- Fail-safe due to linkage overload protection
- Noise and vibration free operation
- Cavitation reduced to an absolute minimum
- Low fuel consumption
- High propulsion efficiency
- 45º rudder angle
- 100º flap angle

Best suited to ...
Vessels in the medium-speed range: AHTS and deep sea anchor handlers, container feeders, multi-purpose vessels, dredgers, Ro-Pax ferries, passenger vessels, large yachts and fishing research vessels.
Proven technology: the high lift TIMON flap rudder

This renowned rudder has built up a global reputation for its excellent manoeuvring and course-keeping performance. Proven Van der Velden technology and a slim profile are combined with an open flap linkage mechanism to great effect.

The TIMON flap rudder is a superior product for those who wish to go further than a conventional (full spade or non-flap) rudder. With the BARKE® slide-bar system and high lift performance, your satisfaction is assured.

Other features
- Easy to maintain
- Sea-resistant and self lubricating bearings
- No cavitation erosion
- 45° rudder angle
- 90° flap angle

Best suited to ...
Fast and medium-speed vessels requiring a high manoeuvring performance: Ro-Pax ferries, mega feeders, multi-purpose vessels, offshore supply vessels and ships that call in port several times in a relatively short time.
Finest fishtail: the Van der Velden® MASTER rudder

Characterised by its fishtail shaped trailing edge, the Van der Velden® MASTER rudder offers very good manoeuvring performance and smooth course keeping. Manoeuvrability is made even more efficient by the remarkable use of the propeller slipstream.

The Van der Velden® MASTER rudder also offers a long life-span and low maintenance. The absence of moving parts makes it a great option for vessels operating in shallow waters, while the combination of a 70° rudder angle with upper and lower endplates allows for a high lift. This design can be optimised to suit a wide range of vessels.

**OTHER FEATURES**
- Reliable robust one-piece design
- Rudder can act as a powerful sternthruster
- Not vulnerable to damage

**BEST SUITED TO ...**
Vessels of all sizes that travel relatively short distances and frequently have to come in and out of harbours or change position: offshore supply vessels, platform supply vessels such as AHTS’s, purse seiners, chemical tankers, Panamax tankers, deep sea anchor handlers and car carriers.
The Van der Velden® ATLANTIC rudder is a no-nonsense, ultrareliable conventional rudder that will ensure you superb course-keeping on long ocean crossings. Its proven hydrodynamic profile can be adapted to suit specific vessel requirements, such as when noise levels need reducing or cavitation decreased.

The absence of moving parts significantly increases the rudder’s life-span and the Van der Velden® ATLANTIC rudder is also known for its low drag and low vibration. Set course and sail...

**Other features**
- Robust and simple design
- Less prone to cavitation
- Low maintenance costs
- 35º up to 50º rudder angle

**Best suited to ...**
Vessels for which course-keeping has the highest priority, i.e. long distance sailing and giant container vessels. For vessels exceeding 24 knots, we recommend the ART™ solution for fuel saving and reduced cavitation (see next page).
Van der Velden ART™ Asymmetric Rudder Technology

Van der Velden ART™ is especially suitable for vessels with a velocity above 24 knots and can be applied to all the Van der Velden rudders.

Due to the rotation of the slipstream, conventional rudders constantly operate in an apparent angle of attack. In addition to increasing drag, this also results in cavitation on the rudder blade.

Our Asymmetric Rudder Technology (ART™) has been especially developed to improve propeller flow. A special layout modifies the profile above and below the centreline of the propeller in such a way that the effects of the rotation of the propeller slipstream are countered. This expands the cavitation-free rudder angle and reduces drag (increasing speed or improving fuel consumption).

Reduced rudder cavitation also gives an extended life span to rudders and shaft bearing systems. Low vibration and noise levels are an additional bonus.

**Other features**
- More speed or fuel reduction
- Extended life-span of rudders and shaft bearing system
- Low vibration and low noise levels (more comfort)

**Van der Velden ART™ Rudder**
The Van der Velden ART™ technology is especially suitable when more speed or more comfort is important. For instance, container vessels, cruise ships and ferries.
Asymmetric Rudder Technology (ART™)
Van der Velden COMMANDER™ steering gear

Available in ram-type and rotary vane versions, Van der Velden COMMANDER™ steering gear systems are the product of advanced engineering at its best. Robust, compact and exceptionally reliable, they have been designed to keep heat and noise to a minimum.

Constant Power: Van der Velden COMMANDER™ Rotary Vane steering gear
A key benefit of rotary vane steering gear is that the rudder angles of up to 2 x 65° give greater flexibility when choosing the design and type of your rudders. Enhanced manoeuvrability and increased control in harbours are the result.

Plug and play: Van der Velden COMMANDER™ Ram-type steering gear
This plug and play solution offers considerable savings in time and money when installed at shipyards. This steering gear is also very easy to maintain, and its double acting cylinders ensure both reliability and redundancy. Two cylinders provide single rudder operation and 50% of the capacity remains available when one cylinder is bypassed.

For more information about these steering gear products, please see the special COMMANDER™ brochure. This is available upon request or you can download it from www.vandervelden-marinesystems.com.
Tailor-made:
The Energy Saving Package

Van der Velden® Marine Systems has founded a partnership with Mecklenburger Metallguss GmbH, expert in designing and manufacturing propellers. Combining decades of knowledge has resulted in the development of a highly effective and efficient propulsion package: the Energy Saving Package.

The Energy Saving Package is a tailor-made propulsion solution that is engineered to the specific needs of the ship’s operational profile. The propeller rudder arrangement is optimised for criteria such as fuel efficiency, effective manoeuvrability, minimising cavitation & vibration, and low maintenance. This results in an optimal propeller geometry and a rudder geometry that is adapted to the slip stream. A propulsion bulb, junction caps or boss cap fins are part of the solution.

The Energy Saving Package includes the efficient, fuel saving Van der Velden ART™ rudder. This ensures highly effective manoeuvrability while the well-designed propellers prevent tip cavitation. Last but not least, the Costa bulb, junction cap or boss cap fins prevent hub vortex losses and cavitation.

For more information about the Energy Saving Package, please see the special Energy Saving Package brochure. This is available upon request or you can download it from www.vandervelden-marinesystems.com.
Van der Velden Marine Systems, headquartered in Holland and with offices around the world, was established in 1962. This fast-growing group of companies now operates in three main areas: Oceangoing, Inland Waterways and Yachting vessels. From practical applications to advanced research & development, synergies between the business units add value across the company.

Recognised as being state of the art, our manoeuvring systems are designed, engineered and manufactured to the highest possible standards. We meet all class society requirements and offer tailor-made solutions for every type of vessel. Customers and yards alike benefit from easy to install and integrated solutions, a unified overall design and one project coordinator for the manoeuvring system.

All systems are backed up by a first class service, maintenance and repair network. Wherever our clients are in the world, Van der Velden engineers quickly respond to all situations. This ultra-efficient 24/7 support pays dividends in terms of ensuring downtime is kept to an absolute minimum and schedules/timetables are maintained.
Complete Van der Velden steering and rudder system
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