rudders, steering gear and the EPS™ thruster
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, steering gear and thruster systems 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, compact steering gear and the award-winning EPS™ thruster and propulsion systems. All can be integrated in a complete package that is tailor-made to your vessel and its specific application.

Welcome to a world of integrated technology

contents

p. 4-5  BARKE® Rudder
p. 6-7  TIMON Rudder
p. 8    Van der Velden® MASTER Rudder
p. 9    Van der Velden® ATLANTIC Rudder
p. 10-11  Asymmetric Rudder Technology (ART™)
p. 12    Van der Velden® COMMANDER Steering Gear
p. 13    EPS™ thruster and propulsion systems
p. 14    About Van der Velden Barkemeyer
Don’t be fooled by cheap imitations, 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.

Accept no copies: 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
- 45° rudder angle
- 100° 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 is 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
- 45º rudder angle
- 90º 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.
Van der Velden® MASTER rudder

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 slip stream.**

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 70º 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 AHTSs, purseiners, chemical tankers, Pan Max tankers, deep sea anchor handlers and car carriers.
for the long haul: the Van der Velden® ATLANTIC rudder

The name says it all... The Van der Velden® ATLANTIC rudder is a no-nonsense, ultra-reliable 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
• 35° up to 50° 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 page 10).
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.

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.
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.

A large variety of control/operation and indicator options are available, and both systems can be easily interfaced with all recognised monitoring, autopilot and VDR systems. Looking for a first class performance that has been proven on countless vessels around the world? Your search is over...

**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 $2 \times 65^\circ$ give greater flexibility when choosing the design and type of your rudders. Enhanced manoeuvrability and increased control in harbours are the result.

Van der Velden® COMMANDER Rotary Vane steering gear includes a compact actuator inside a closed housing, with equal torque at all rudder angles. Inside the actuator is a fully integrated rudder carrier for rudder stock diameters of approx. 660 mm (depending on rudder angle). The smoothest possible rudder movement is assured.

**Plug and Play: Van der Velden® COMMANDER Ram-type steering gear**
The ideal steering gear system when installation space is at a premium. Mounted on a single adjustable foundation plate, the Van der Velden® COMMANDER ram-type system offers considerable savings in time and money when installed at shipyards.

This plug and play solution 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.
the award-winning EPS™ thruster and propulsion systems

Our revolutionary EPS™ thruster and propulsion systems are incredibly quiet and compact. In addition to the sound and space saving benefits, they offer exceptional power, low weight, easy maintenance and a green alternative to conventional thrusters.

Winner of the METS DAME and HME Dutch Innovation awards, the EPS™ is currently available in three different versions. A non-retractable azimuthing version is under development.

**EPS™ Side Tunnel Thruster**
The perfect substitute for traditional stern and bowthrusters, offering an equally powerful thrust on both sides of the vessel. Solution of choice onboard vessels when precise manoeuvrability, silence and absolute comfort are required.

**EPS™ Side Tunnel Retractable Thruster**
All the above, with the additional option to retract and store the thruster in the hull when drag is an issue. This version is especially suitable for vessels that accept no compromises on maximum speed and for those operating in shallow waters.

**EPS™ Azimuthing Retractable Thruster**
Able to perform propulsion and steering duties, the azimuthing thruster’s blades are designed for one direction rather than the two needed for a side thruster. Provides phenomenal manoeuvrability, can turn 360° in its own length. Ideal onboard vessels that have a higher frequency of dynamic positioning, station keeping and mooring.
Van der Velden Barkemeyer is part of Van der Velden Marine Systems, head-quartered in Holland and with offices around the world. Established in 1962, this fast growing group of companies now operates in three main areas: Oceangoing vessels, Inland shipping and Yachting. From practical applications to advanced research & development, synergies between the three groups add value across the board.

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.

In addition to steering gear, rudders and thruster systems, Van der Velden’s portfolio also includes nozzles, marine cranes, heat exchangers and cooling units.

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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