

MANOEUVRING SYSTEMS

BECKER SCHILLING® RUDDER



RUDDER STOCK
Custom-engineered to withstand high torque loads

RUDDER TRUNK
Robust and precise construction, providing secure sealing and alignment

STREAMLINED MID BODY
Ensures smooth flow attachment and reduced drag, enhancing lift and efficiency

FISH TAIL
Maximises lift and directional control, enabling tight turns and precise manoeuvring even at zero speed

BLUNT LEADING EDGE
Improves flow attachment and ensures controlled flow separation

RUDDER BLADE
Hydrodynamically optimised shape for maximum lift with minimal resistance

STABILISING FORCES
The specially designed rudder profile reduces hydrodynamic resistance and increases lift force



TURNING CIRCLES UP TO
70°

STRUCTURE OF THE
BECKER SCHILLING® RUDDER

Streamlined mid body for precise control

The Becker Schilling® Rudder is a high-lift rudder with a specially developed profile that enhances the manoeuvrability of vessels of all sizes and types.

It is a strategic optimisation of the use of the trailing edge area and its shape is reminiscent of a fish tail.

This unique shape accelerates the flow and maximises rudder balance, thereby optimising propeller coverage.

Ideal choice for:

Ships requiring maximum manoeuvrability at low or zero speed

Tankers

General Cargo Vessels

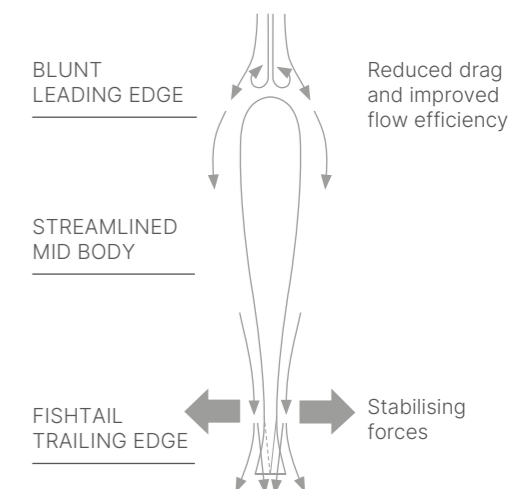
Heavy Lift Vessels

Offshore Vessels & Workboats

Fishing Vessels

Unique profile for accelerated flow and improved balance

- ✓ Optimised profile for better hydrodynamic efficiency
- ✓ Minimal rudder hunting for steady course-keeping
- ✓ High lift and reduced weight improve vessel's responsiveness
- ✓ Exceptional control for berthing situations and crabbing at zero speed
- ✓ Reliable steering performance during astern manoeuvres
- ✓ Reduced cavitation and rotational losses
- ✓ Optimal Dynamic Positioning (DP) functionality

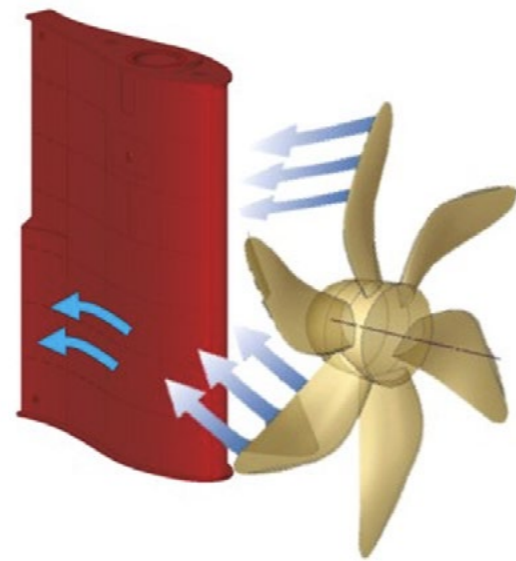


BECKER SCHILLING® TT RUDDER BALANCING MANOEUVRABILITY AND PROPULSION EFFICIENCY

Proven performance for your ship

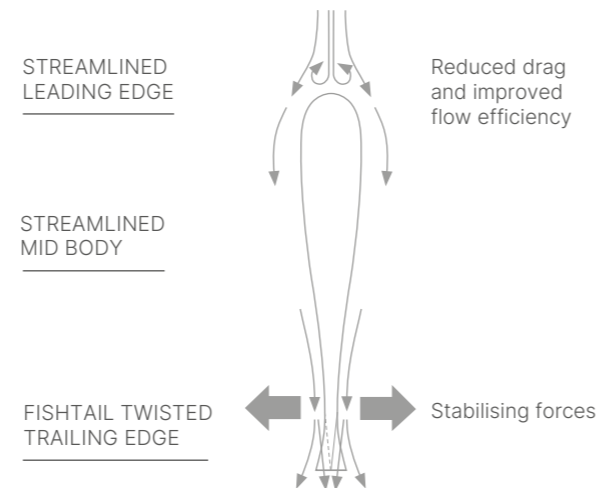
The Becker Schilling® TT rudder is a further development of the Schilling® rudder and aims to maximise propulsion efficiency. With a slimmer design and a twisted trailing edge, it offers more efficient performance without compromising manoeuvrability.

While the Becker Schilling® Rudder stands for extreme manoeuvrability, the Becker Schilling® TT Rudder offers a balanced compromise between manoeuvrability and efficiency.



General advantages

- ✓ Combines high lift with twisted profile
- ✓ Optimal balance between manoeuvrability and efficiency
- ✓ Improved harbour manoeuvring
- ✓ Provides high lift forces without movable parts
- ✓ Tailored for reduced maintenance
- ✓ Safe operation in various conditions, including ice
- ✓ Crabbing at zero speed



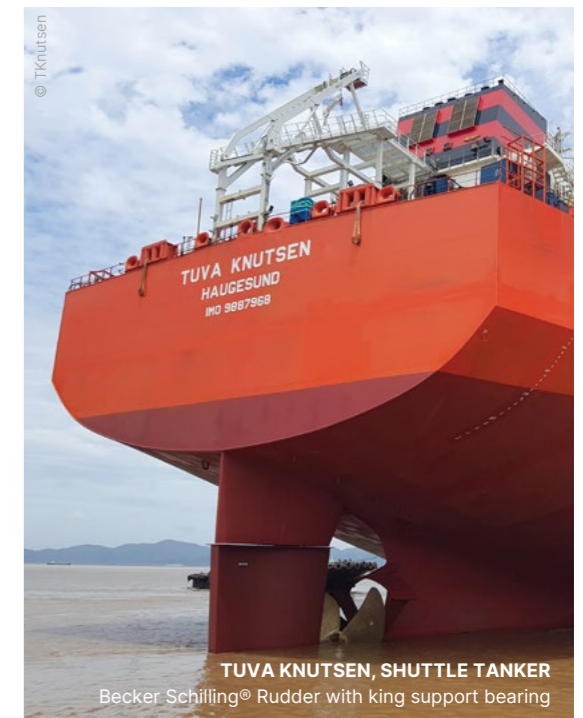
HIGH LIFT IN ACTION

The Becker Schilling® Rudder proves its power where extreme manoeuvrability is needed most.

NATIONAL GEOGRAPHIC QUEST, EXPEDITION CRUISE VESSEL
Becker Schilling® Rudder



ARKLOW CASTLE, GENERAL CARGO SHIP
Becker Schilling® Rudder



TUVA KNUTSEN, SHUTTLE TANKER
Becker Schilling® Rudder with king support bearing

Rudder Options



TWISTED LEADING EDGE



KING SUPPORT



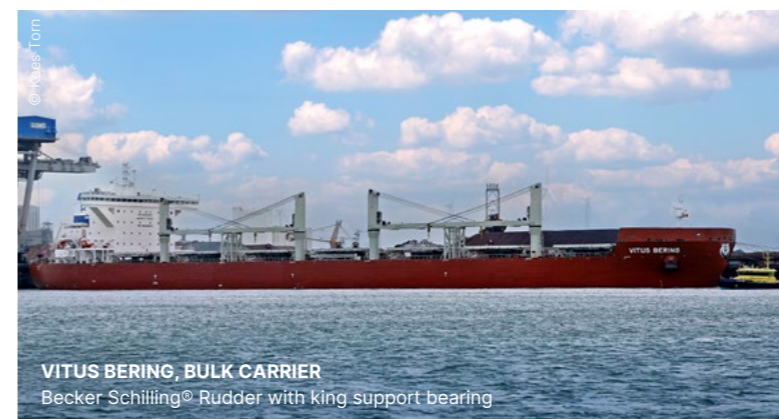
CLOSED LINKAGE



RUDDER BULB



HEEL PINTLE



VITUS BERING, BULK CARRIER
Becker Schilling® Rudder with king support bearing

MANOEUVRING SYSTEMS

BECKER SCHILLING® RUDDER

SHOW PRODUCT

MANOEUVRING SYSTEMS

RUDDER OPTIONS



Customised functions for maximum efficiency and safety.

Discover the wide range of options and additional functions that take our rudder and manoeuvring systems to the next level. By using these options, you can, for example, achieve improved rudder efficiency, minimise the risk of cavitation or increase the performance of your systems under special environmental conditions.

Whether larger rudders with the same efficiency, protection against extreme environmental influences or special adaptations for use on fishing boats – our customised solutions offer you numerous advantages to make the operation of your ships even more efficient and safer.

Custom-fit solutions for:

Becker Flap Rudder

Becker Twist Rudder

Becker Schilling® Rudder

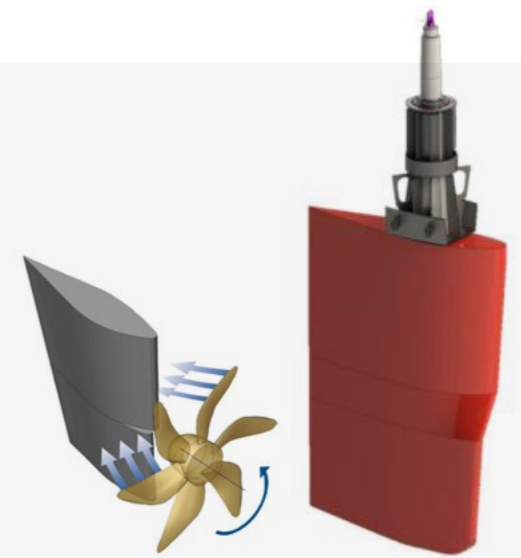
Becker Nozzle

Twisted Leading Edge

Improved rudder efficiency and minimised risk of cavitation

Efficiency, protection and performance – combined in one smart rudder design. A twisted rudder reduces cavitation by evening out pressure on the blade, improving efficiency and lowering erosion.

Its split-profile design aligns with the propeller wake, cutting drag and enhancing overall performance.



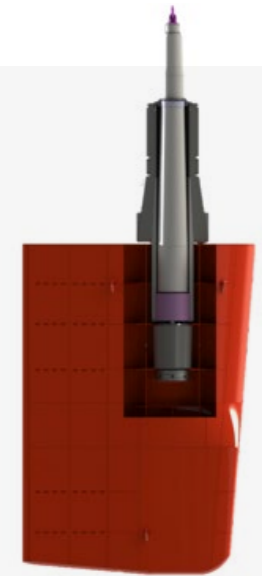
Strong rotational flows from the propeller create areas of low pressure on the rudder blade.

King Support Bearing

The key to large full spade rudders

The Becker King Support enables large full-spade rudders up to 130 m² with a slim profile. By moving the main bearing closer to the force centre, bending moments are reduced, resulting in a more stable and efficient rudder.

The design reduces maintenance needs thanks to a smart bearing arrangement design and no rudder horn and improves manoeuvrability at low speeds.



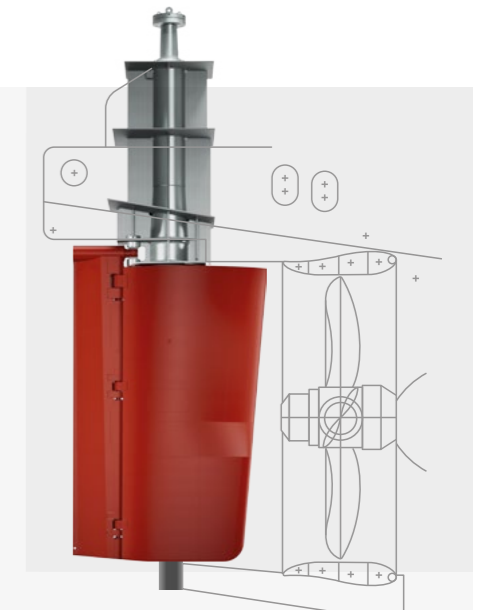
Rudder with King Support Bearing

Heel Pintle

Effective rudder control for offshore vessels and workboats

Becker rudders with heel pintle are ideal for smaller and slow-moving vessels like tugs or fishing boats. They offer additional stability and reduced risk of interaction between the rudder and ropes or nets.

The design reduces bending moments, allows for a slender rudder blade and requires only a compact steering gear.



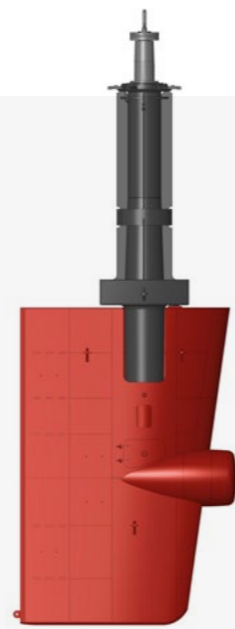
The heel pintle arm acts like a rope guard and protects the rudder from ropes and nets.

Rudder Bulb

More efficiency through targeted flow control

The Becker Rudder Bulb improves flow from the propeller hub to the rudder, reducing vortex strength and cavitation while increasing efficiency.

CFD-simulations and tank tests confirm power savings of up to 1.5%. Suitable for various vessel types and propeller systems, it can be used in both new builds and retrofits.



Closed Linkage

Closed connecting linkage for demanding environments

Designed for harsh environments, the closed linkage protects the flap mechanism from ice, sand and impact while ensuring smooth manoeuvring.

With integrated overload protection and reduced hydrodynamic noise, it offers maximum reliability and durability under extreme conditions.



Rudder Options



TWISTED LEADING EDGE



KING SUPPORT



CLOSED LINKAGE



RUDDER BULB



HEEL PINTLE



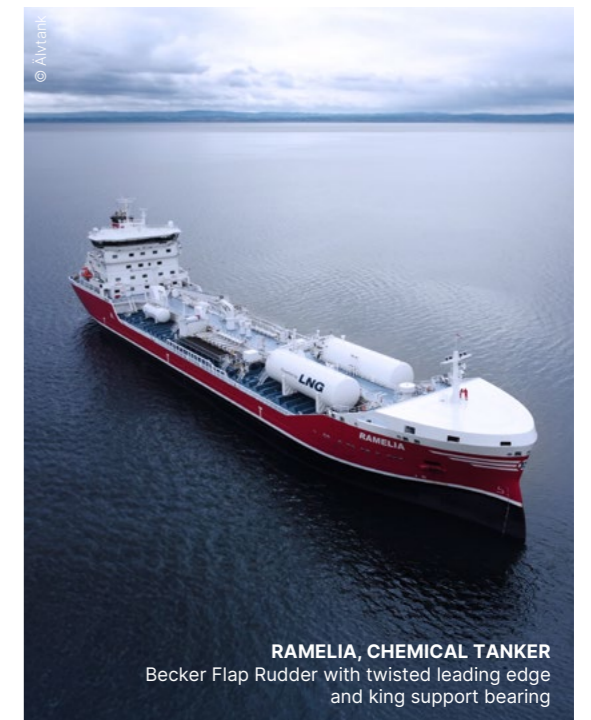
TAILORED RUDDER SOLUTIONS

Custom options designed for maximum efficiency and safety.

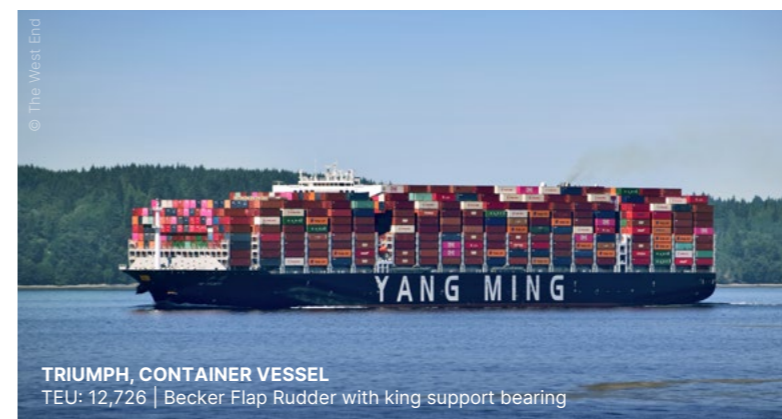
MONTELOURIDO, FISHING VESSEL
Becker Flap Rudder with heel pintle



SCANDIA SEAWAYS, RORO CARGO VESSEL
Becker Flap Rudder with twisted leading edge and rudder bulb (twin rudder system)



RAMELIA, CHEMICAL TANKER
Becker Flap Rudder with twisted leading edge and king support bearing



TRIUMPH, CONTAINER VESSEL
TEU: 12,726 | Becker Flap Rudder with king support bearing

MANOEUVRING SYSTEMS

RUDDER OPTIONS

SHOW PRODUCT



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