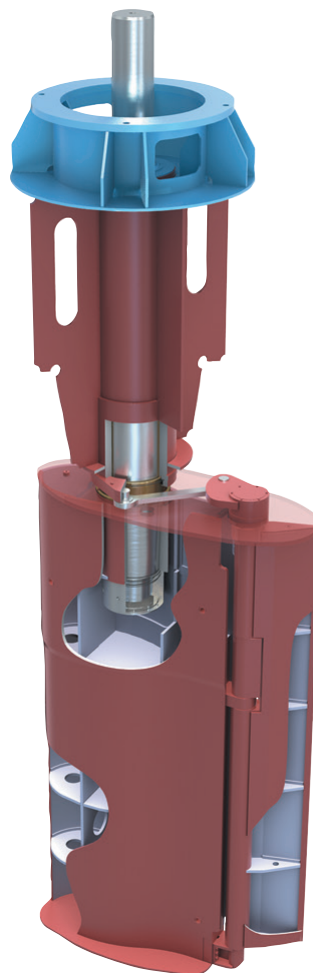


# FLAP RUDDERS



KONGSBERG



## KONGSBERG FLAP RUDDERS

# Rudders for high manoeuvring performance

### OPTIONS AVAILABLE

- Support type
  - Heel Pintle
  - Neck Bearing
  - Direct Trunk Support
- Lubrication system
  - Automatic or manual
- -Seawater lubricated
- Cathodic corrosion protection
- Trunk with Steering Gear foundation
- Special rudder design on request
- Special bearings/liners
- Wire Guard
- Stainless steel liners

The flap rudder is a result of intensive research and years of experience in ship construction and the manufacture of ship equipment. Shaped with a bulbous leading edge, an active flap and large vane elements, the flap rudder has superior steering and manoeuvring abilities for vessels with lower and medium speeds.

### 1. Rudder trunk

Designed for minimum installation time and cost. The trunk is tailor made to suit each individual vessel.

### 2. Rudder stock

Made to suit all steering gears. Both hydraulic and splined coupling to rudder, tested and approved by class society.

### 3. Flap

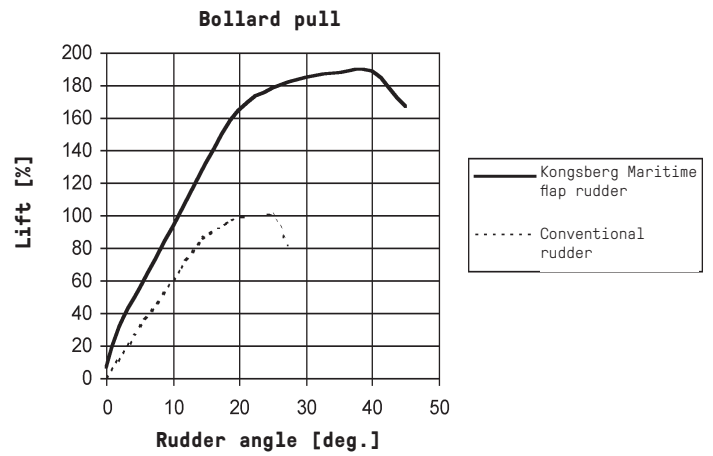
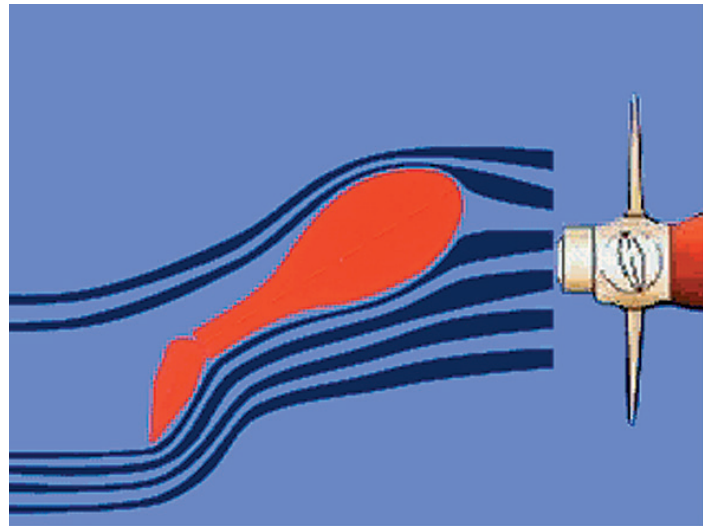
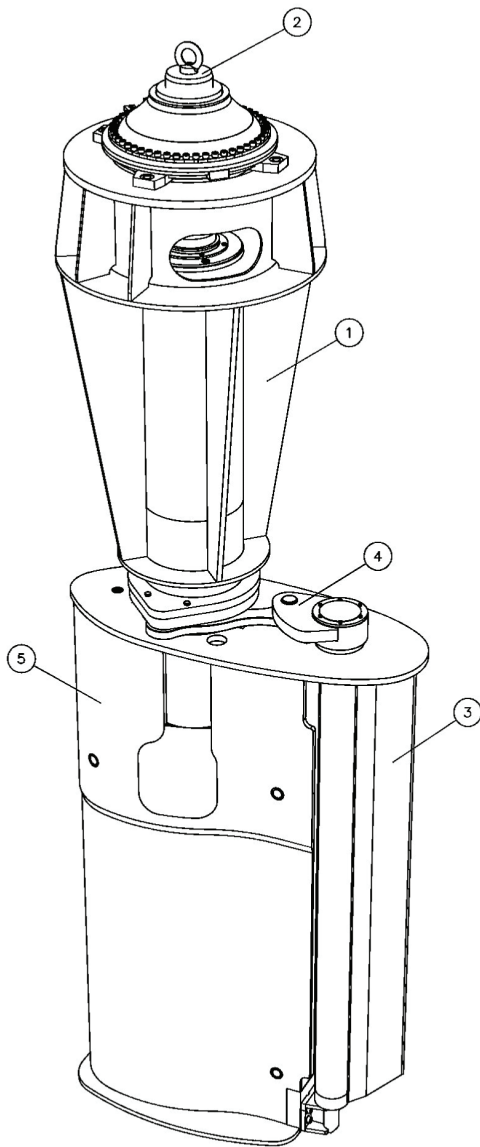
Connection to rudder by hinges. Welded construction as in the main rudder.

### 4. Flap mechanism

Well proven mechanism also at high ice classes

### 5. Rudder

Welded construction of certified steel. Drain plugs of stainless steel. Lifting holes arranged.



#### PRINCIPAL SPECIFICATION

Rudder angle	± 45°
Flap angle	± 100°
Rudder balance	approx. 34 %
Flap length	approx. 24 %
Rudder area	up to 20 m <sup>2</sup>
Chord length	1,2-1,5-1,75- 2,0-2,33-2,7- 3,3 m
Suitable for vessel speeds	up to ~ 18 knots

