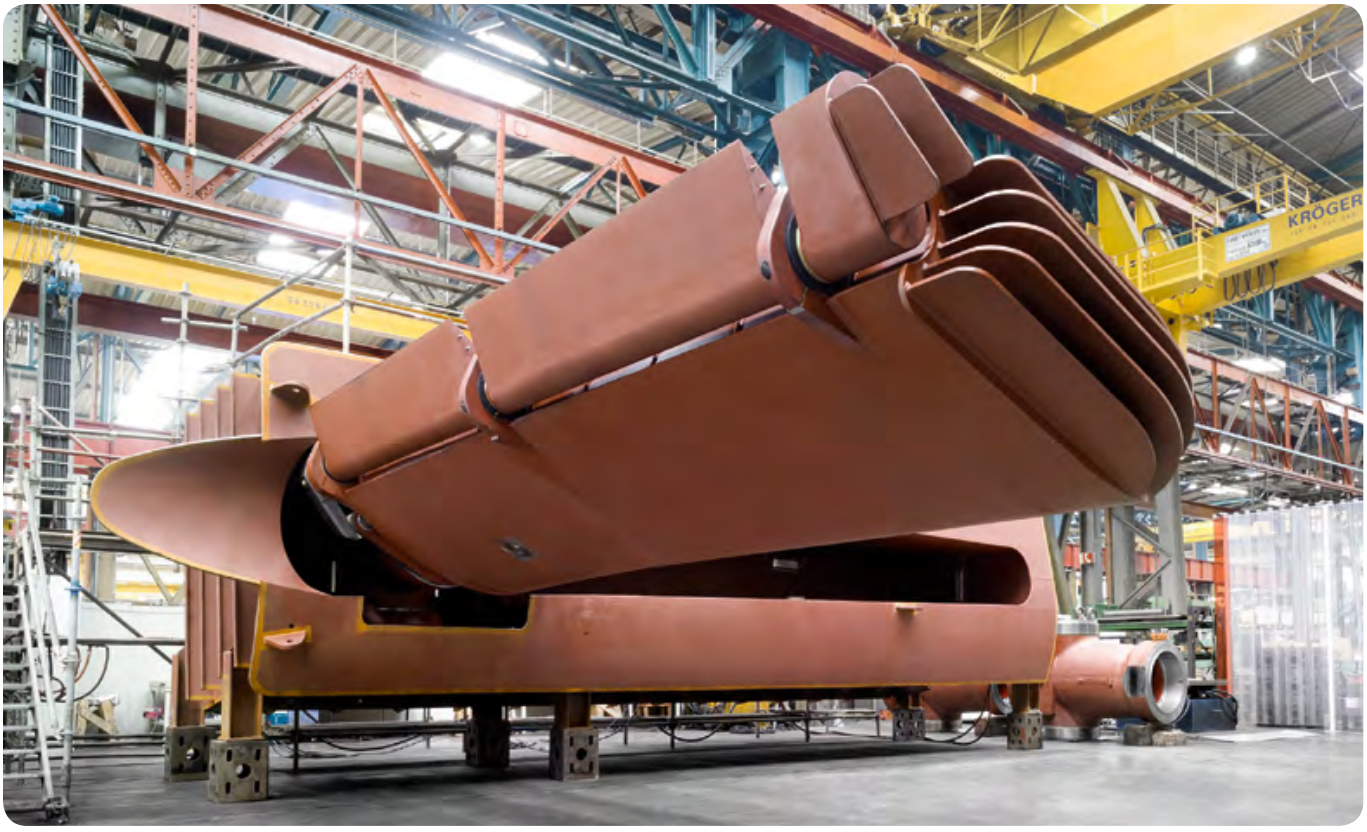
SIMPLEX TURBULO

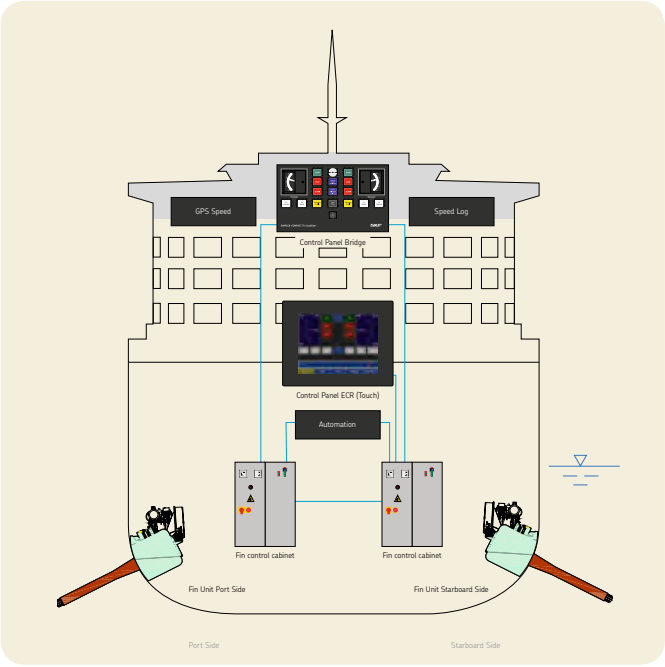
SKF

Retractable fin stabilizer type S



General description

- Retractable fin stabilizer for underway stabilization of all kinds of vessel
- Flapped fin design
- Anti-vortex tip fairings
- Rotary vane fin actuators
- Fin area range from 1,2 to 20 m^2

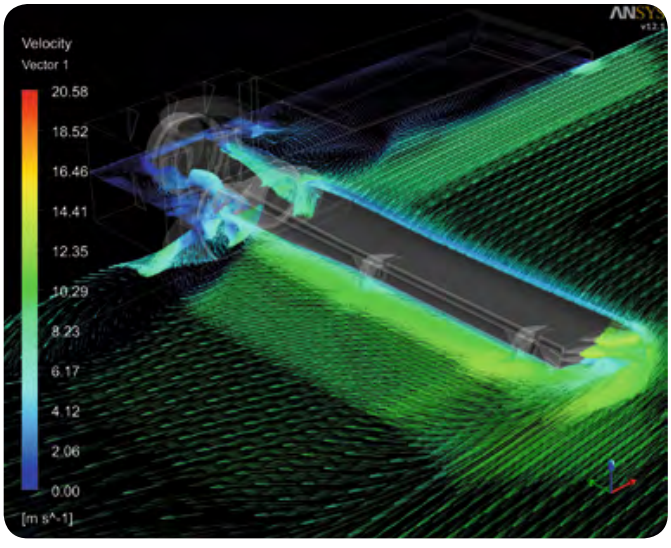


Advantages

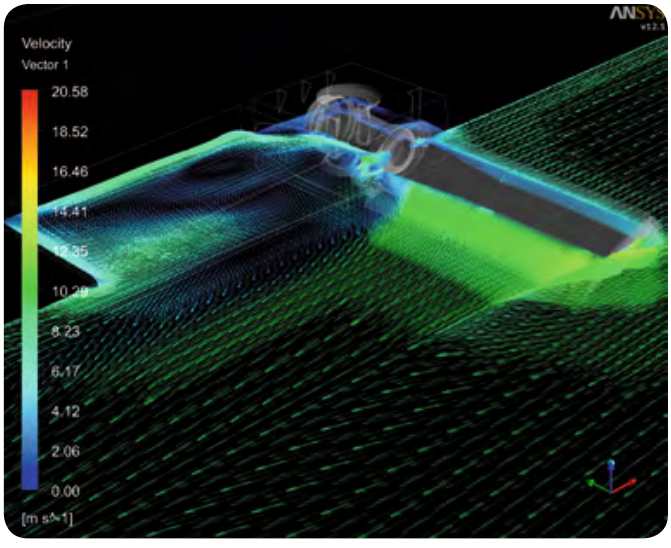
Design

- Patented anti-vortex-tip fairings: increased lift, smaller fin area required, low drag, fuel saving
- Flow-off recesses at fin box: low cavitation, minimal flow resistance
- Flapped fin design: synchronously actuated, up to 30% increased lift compared to one-piece fin
- Accumulator supported hydraulic system: reduced size of motors and pumps, lower demand on electrical current, lower peak load on power supply, decreased noise level, increased dynamic system response
- Rotary vane fin actuators: extremely compact, powerful and highly reliable; torque transmission is free of unbalanced forces on the fin, avoiding additional loads on the bearings and ensuring high fin movement precision
- Compliance with classification societies regulations, SOLAS and MARPOL 73/78 convention specifications
- Compliant with Vessel General Permit (VGP) 2013 regulations

Investigations on different fin box openings depending on ships' operation



Housing forward (standard)



Housing aft

Installation

- Integration into ship structure (fin box) designed in close contact with the shipyard
- Final manufactured unit, fully tested including operation and automation test
- Delivered ready-to-use to any shipyard worldwide
- Final works to be done by shipyard: welding into the ship structure, wiring and cooler connection

Operation

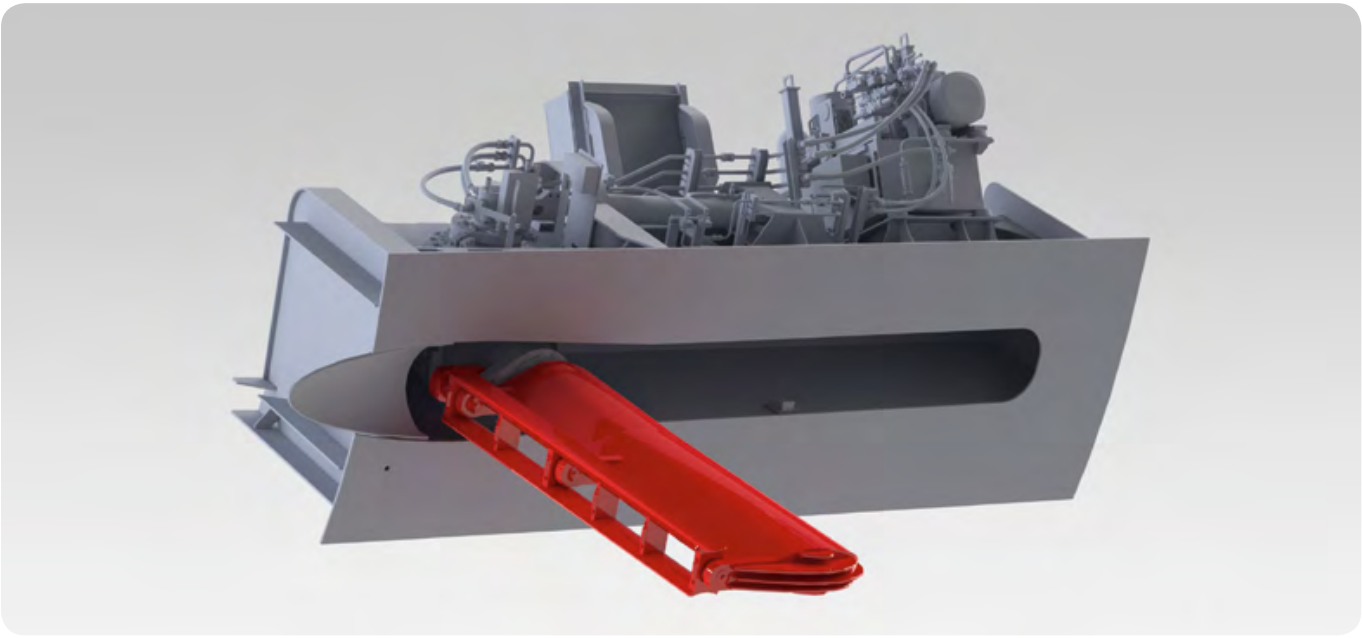
- Easy operation by simple start or stop commands
- Control system operates fully adaptively to the ship speed, sea state and roll motion behaviour of the vessel. Manual crew adjustments are possible when required
- For manual control, during inspections or any intermediate maintenance, operation and service switches are located at each fin control cabinet
- Customised mode selection: Control system design enables single fin or twin fin operation
- Control system is fully integrated into the motor starter cabinets. No additional central control or sensor cabinets are required
- ECR Touch Control Panel provides identical control functions to the bridge control panel as well as additional status, alarm and service information for best operational comfort and information. It can be set to passive mode to prevent the stabilizers from being started unintentionally

Service

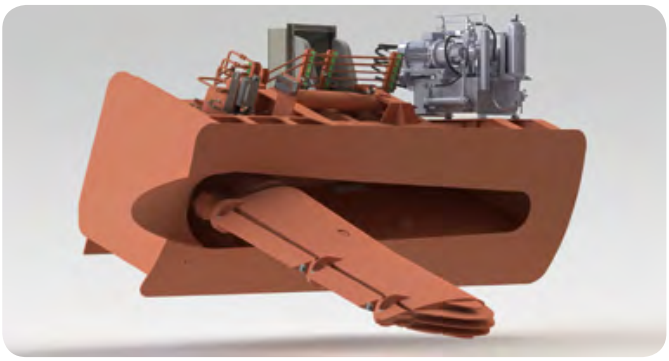
- 24/7 in-house service by our own highly trained personnel
- Service records such as after-collision overhaul and underwater stabilizer fin exchange

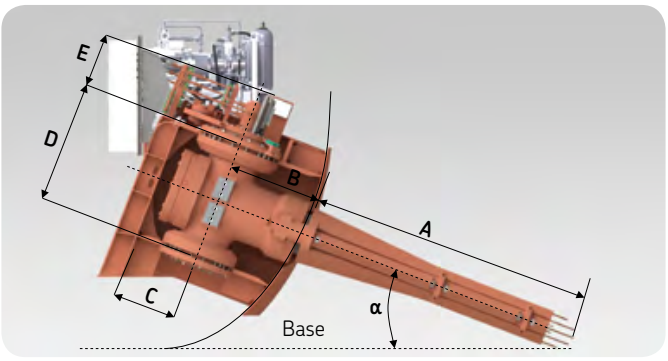
Application

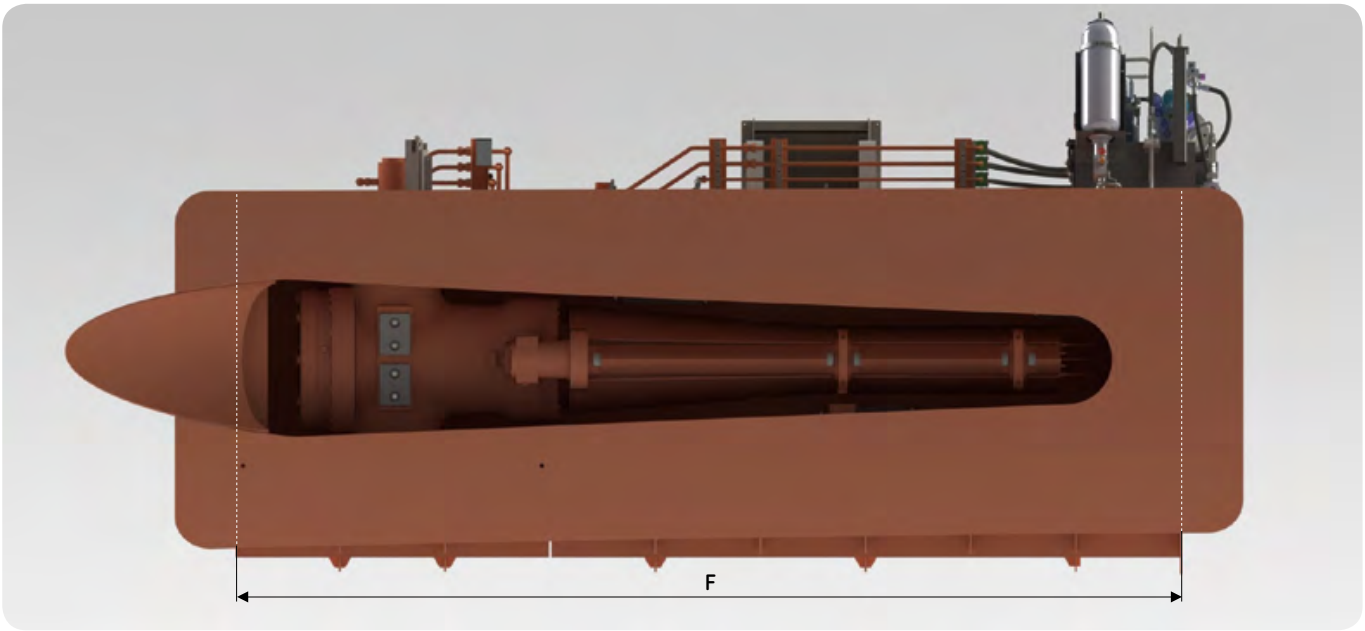
Ultra High Lift (UHL) fin: specially designed tail flap for increasing the effective lift and roll reduction for low service speed.



UHL fin profile







Dimensions/Type	S 100	S 200	S 300	S 400	S 500	S 600	S 700	S 800
Fin area [m²]	1,20–1,80	2,00–2,70	3,00–4,20	4,80–6,80	6,50–9,30	8,00–12,00	12,50–16,00	16,30–20,00
A [m]	1,55–2,00	2,00–2,70	2,44–3,41	3,10–4,35	3,60–5,15	4,00–5,90	5,00–6,40	5,70–7,01
B [m]	0,60	0,71	0,95	0,99	1,20	1,33	1,60	1,88
C [m]	0,50	0,53	0,58	0,69	0,80	0,86	1,01	1,20
D [m]	0,78	0,52	0,96	1,22	1,40	1,54	1,70	1,90
E [m]	0,62	0,62	0,73	0,73	0,73	0,73	0,89	0,93
F_{min} [m]	3,00–3,40	3,50–4,30	4,30–5,20	5,00–6,30	5,90–7,50	6,50–8,40	7,90–9,30	9,10–10,50
α [deg]	15–30	15–30	15–30	15–30	15–30	15–30	15–30	15–30

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