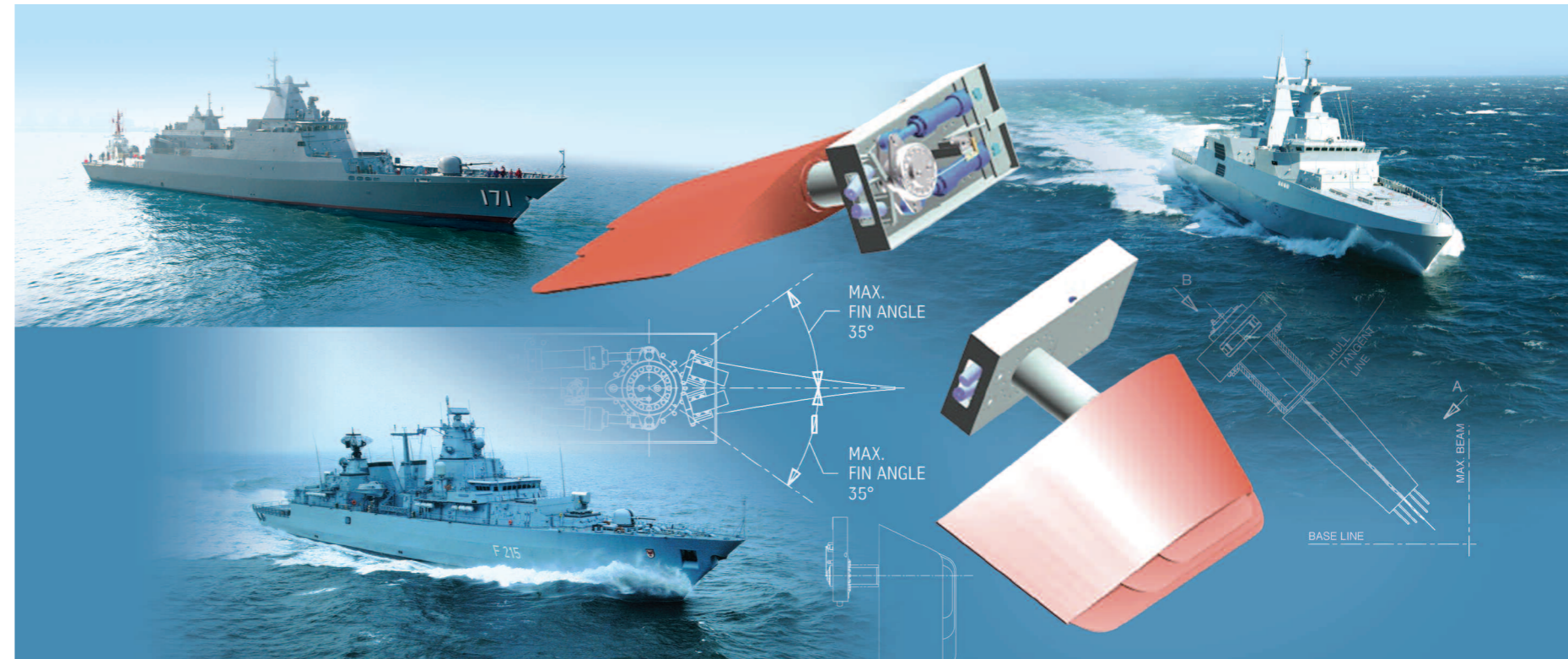


# SIMPLEX-COMPACT

## Non-Retractable Fin Stabilizer Type F



**Blohm + Voss Industries GmbH**  
P.O. Box 11 22 89  
20422 Hamburg, Germany  
Phone: + 49 40 3011 - 1128  
Fax: + 49 40 3011 - 1907  
E-Mail: sales.bvi@thyssenkrupp.com  
Internet: www.bv-industries.com

2. Issue 8.2010

**Blohm + Voss Industries**



## More than 40 Years of Experience



Type	Fin Area [m <sup>2</sup> ]	A [mm]
F100	1,40	917
F100	1,70	1010
F100	2,00	1095
F200	2,00	1095
F200	2,40	1200
F200	3,00	1342
F300	3,00	1342
F300	3,60	1470
F300	4,50	1643
F400	4,50	1643
F400	5,50	1817
F400	6,80	2020
F500	6,80	2020
F500	8,40	2245
F500	10,30	2486

Fin outreach = A + 20 mm

Blohm+Voss Industries GmbH (BVI), is located in the port of Hamburg. Due to state of the art technical solutions and constant innovation, BVI's ship components have attained a worldwide reputation under the trade name Simplex-Compact.

The development and production of non-retractable fin stabilizers started already in the early 1950s. This was followed in 1954 by the retractable fin stabilizers. Since then BVI has supplied more than 550 Simplex-Compact fin stabilizers all over the world.

The Simplex-Compact non-retractable fin stabilizers represent an optimal solution for a wide range of naval vessels, like corvettes, frigates, destroyers and OPV.

### Proven Design

Simplex-Compact non-retractable fin stabilizers have been supplied to Navies all over the world, like Germany, Poland, Portugal, Argentina, Turkey, Malaysia, Thailand, Greece, Korea and South-Africa.

**Meeting All Military Standards for Noise, Vibration and Shock**  
Simplex-Compact fin stabilizers conform to all relevant regulations laid down by the classification societies, naval authorities and navies.

### Internationally Patented Anti-Vortex-Tip Fairings

Simplex-Compact fins are fitted with anti-vortex-tip fairings to prevent energy dissipating vortex cavitations. Results:

- minimized drag coefficient
- additional lift
- lowest drag
- fuel saving
- minimized acoustic water signature

### Independent Locking System

When not in use, the fins are kept in neutral position by a hydraulic/mechanical locking assembly.

### Accumulator Supported Hydraulic System

Our hydraulic power units are supported by fast response accumulators to reduce size of motors and pumps. Results:

- low current demand
- low peak load on the power supply
- high dynamic system response
- low noise level.

### Special Safety Feature

In case the electric power supply fails during stabilizer operation, the fin units are automatically set in zero position and locked by the hydraulic accumulators. This is possible without any external energy supply.

### Milestones

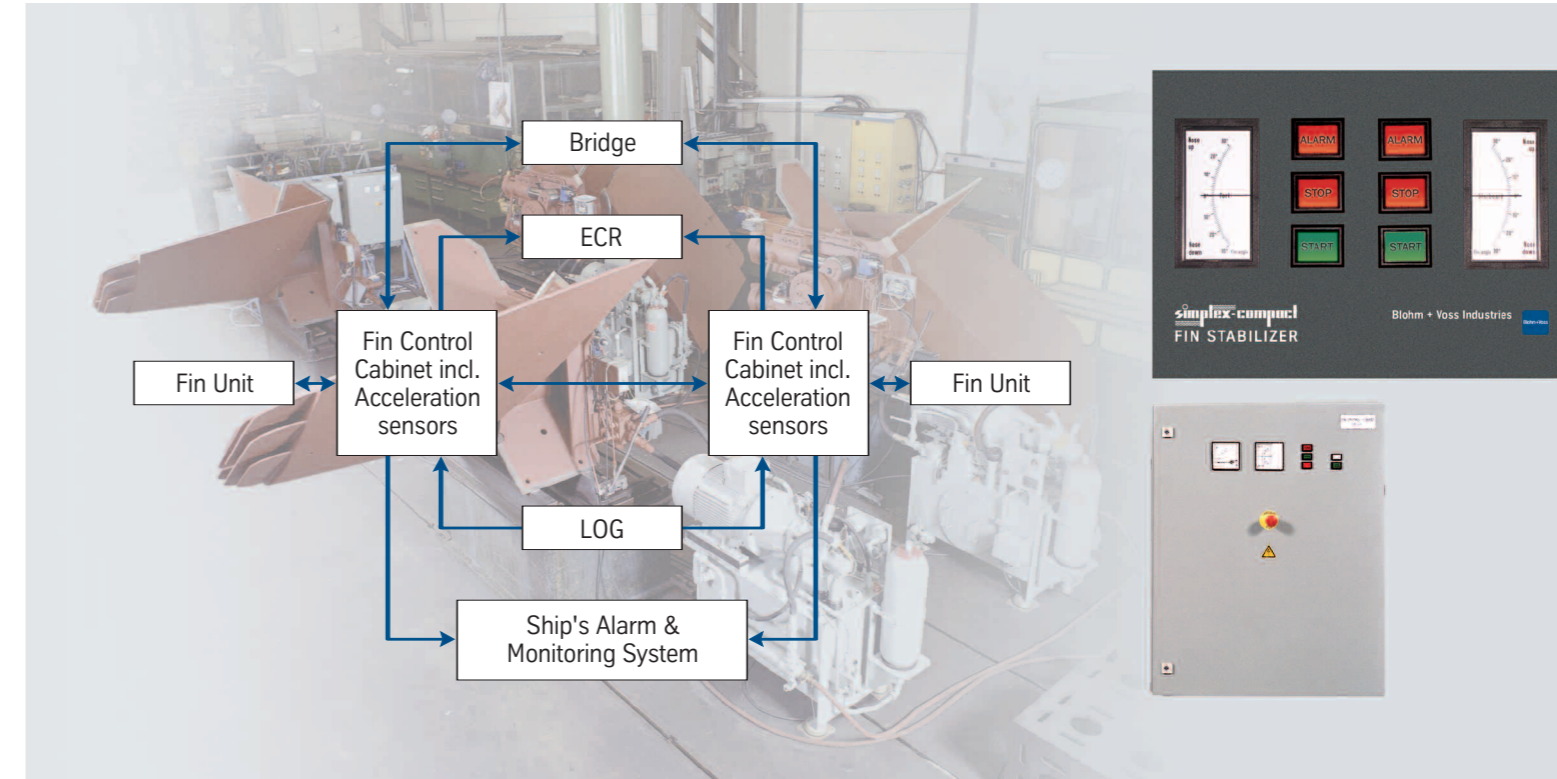
**1972**  
Installation of our first non-retractable fin stabilizer

**1991**  
Anti-Vortex-Tip fairings

**1998**  
First digital stabilizer control system

**2007**  
New generation of non-retractable fin stabilizer

## Simplex Adaptive Control



Blohm+Voss Industries' fin stabilizers are operated by a state-of-the-art automatic control system which ensures

- easy operation and monitoring,
- high reliability,
- and low installation efforts.

This technical solution offers a clear concept for standard or multiple fin configurations. Each fin drive unit is controlled by a local Fin Control Cabinet (FCC) which is equipped with own control and supervising devices, motor contactors and power supply.

### Wear Resistant Sensors

Roll motions are continuously detected by sets of wear resistant acceleration sensors. The programmable logic control algorithms compute the current fin angle from the roll angle, roll velocity and roll acceleration signals as well as from the ship's LOG information.

### Easy Operation

Only simple Start or Stop commands from the bridge control panel are necessary to activate or to shut down the system – in fully automatic sequences. For direct control in regular mode, during inspections or any intermediate maintenance, operation and service switches are located at each of the fin control cabinets.

### Customized Mode Selection

The twin design conception enables a single fin operation, a standard twin fin operation, or various options in case of a multiple fin configuration. Depending on the various sea conditions the ship's crew may select the most effective or the most economical mode.

The control system requires only local control cabinets beside the control panels at the bridge and in ECR.

### Touch Control Panel

A touch control panel mounted in the starboard FCC gives detailed information about fin stabilizer system states, parameters, sea states as well as faults.