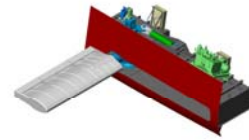
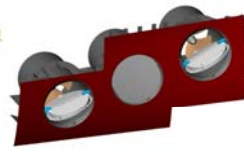
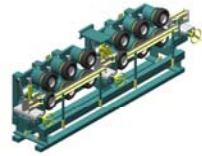




**Marine  
Department**



**Engineering for Marine Equipment**



**Ship stabilization systems**

# NON- FOLDING FINS ANTI-ROLL STABILIZER



## SAFARI

### HISTORICAL RECORD OF THE “SAFARI” CONCEPT

Active non-folding fin stabilizers have been developed by the FL Marine Department (previously ACH Engineering) since 1974. These fins have been fitted to several vessels and have proved to be efficient and reliable.

After more than 30 years of use, the follow-up on the first installed systems is still underway.

To meet the new requirements of the market, a new range of non-folding fin stabilizers is being offered. Fin areas range from 1.6 m<sup>2</sup> up to 16.5 m<sup>2</sup> and are available for both civil and military vessels.

The main targets for the new design are to reduce costs with easier production and improved reliability. Our systems are optimized to aid shipyard installation.

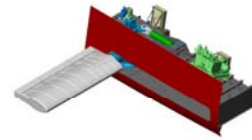
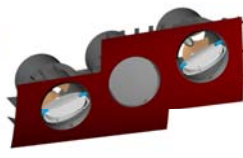
### MAIN FEATURES AND ADVANTAGES OF THE “SAFARI” CONCEPT

Mechanical assembly of “SAFARI” is designed to optimize the reliability of the stabilizer. The shaft is mounted onto two pre-stressed roller bearings to reduce vibration on the fastest ships.

The mounting of the fin on the shaft is ensured by a locking assembly to aid the stabilizer mounting. To reduce maintenance costs, the seal system can be changed without dismounting the fin. When the use of stabilizers is not required, a mechanical fin ensures immobility of the fins.

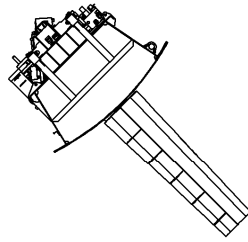
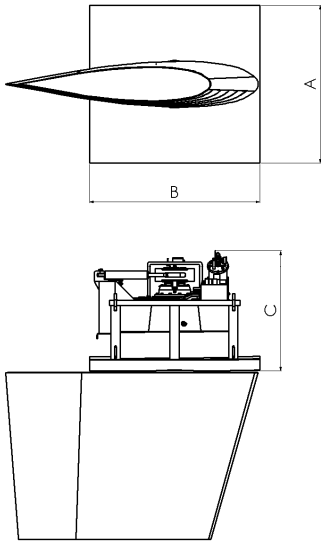
To add flexibility to the system design, customers can choose to install one or two hydraulic power units. To avoid installing oil pipes on ship, we use a pressurized oil tank fixed on the stabilizer frame.

Our stabilizers are featured with a real-time computerized system with constant self-checking to ensure correct operations. Our systems can be adapted to our customers' standards.



**Engineering for Marine Equipment**

**MAIN CHARACTERISTICS AND DIMENSIONS OF THE "SAFARI" RANGE**



TYPE	FIN		MECHANISM			WEIGHT
	SURFACE mini maxi (m2)	CHORD  (m)	A  (m)	B  (m)	C  (m)	Tons  (2 fins)
2 F	1.61	1.640	1.10	1.55	1.00	3.2
	2.50	1.640	1.10	1.55	1.00	3.5
3 F	2.42	2.000	1.20	1.70	1.10	4.3
	3.70	2.000	1.20	1.70	1.10	5.0
5 F	3.63	2.460	1.30	1.95	1.30	7.8
	5.60	2.460	1.30	1.95	1.30	9.0
7 F	5.45	3.015	1.40	2.30	1.50	10.8
	8.30	3.015	1.40	2.30	1.50	12.6
11 F	8.17	3.690	1.50	2.75	1.80	17.0
	12.40	3.690	1.50	2.75	1.80	20.5
16 F	12.26	4.520	1.80	3.10	2.10	28.2
	16.53	4.520	1.80	3.10	2.10	31.0

5: Bridge control unit



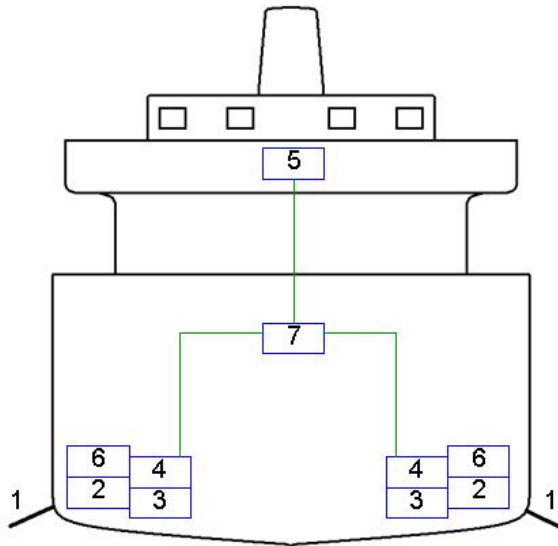
3: Hydraulic power unit



7: Central control unit



4: Local control unit



1: Fins



6: Lubrication unit



2: Stabilizer mechanisms

