

## The premium choice

Humphree equipment is designed and manufactured to deliver world-class quality and reliability. Customer support and spare parts are available wherever and whenever needed, through our Head Office in Sweden or via our expanding network of local representatives around the world.



# stabilization

IMPROVE YOUR WORKING DAYS



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**HUMPHREE®**  
Trim and stabilization systems

## Improve your working days

Since 2002, our naval engineers have developed premium products for the Marine Commercial market which make a significant difference at sea: The difference between comfort and seasickness, the difference between low and high fuel consumption, the difference between excellent visibility from the helm or poor visibility from the helm, the difference between a successful working day and a mediocre one.

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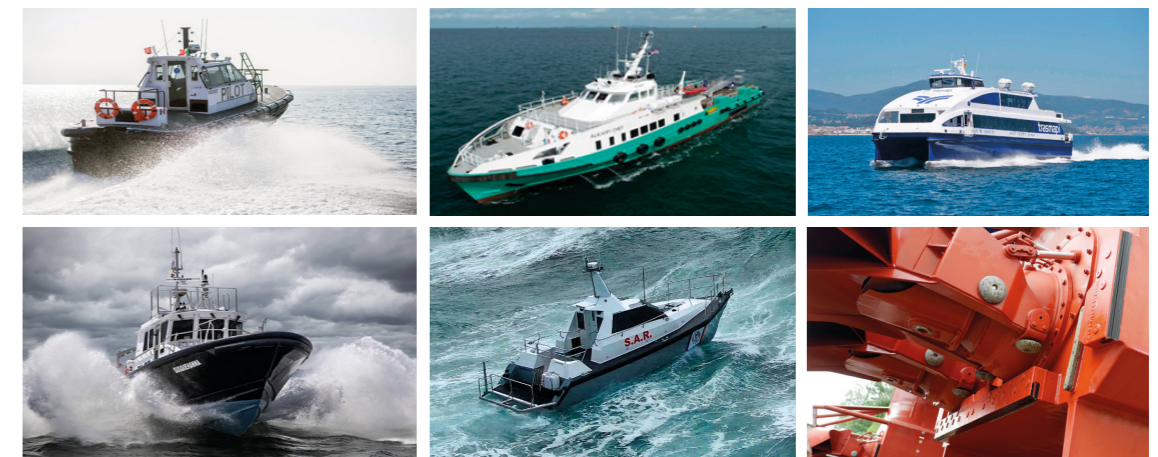
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**HUMPHREE®**

## It's all about comfort and safety

For planing and semiplaning monohull and catamaran vessels, our interceptor based stabilization systems will make you experience less roll and pitch motions, better performance, lower fuel consumption and safe comfortable turns. The interceptor trim tabs provides the most efficient trim and stabilisation system on the market.

Our electric fin stabilisation system will stabilise your boat at anchor and throughout the whole speed range with unique performance also during turns integrated with the steering of the boat. The integration of interceptors and fin stabilisers will provide an exclusive ability to control your vessel with comfort and safety no matter if you are at anchor or at speed.



# interceptors

## Automatic Interceptor Trim Tab Systems

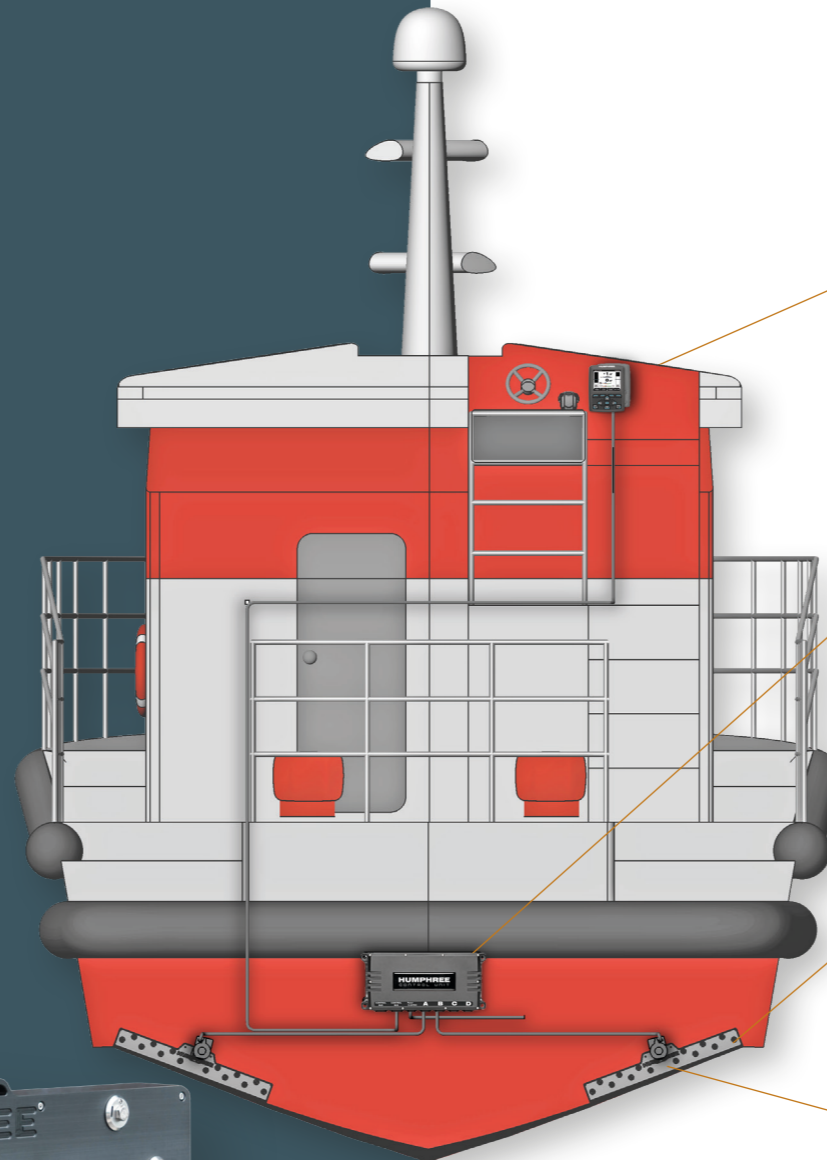
Humphree Stabilization reduce roll motion with up to 50% and it feels like even more. Your working day will be an entirely new experience.

Humphree interceptor trim tabs are the premium choice for vessels 25ft(8m) or larger. During navigation, ultrafast electric servo motors actuate the large stroke interceptor blades to counteract roll and pitch motions. They also control both trim and list. With coordinated turn, the system will adjust the heel angle for safety and comfort as well as a possibility for reduced turning radius.

For a perfect fit, Humphree offers interceptors of different models and sizes. All are engineered for Commercial application with extensive use. A Humphree representative will assist you in selecting the appropriate Interceptors.

## Interceptors for any size of vessel

- **X-SERIES** X series interceptors are suitable for vessels measuring 25 to 60 feet. Available in five standard sizes: 300 – 900 mm. All with 50 mm blade stroke
- **H AND HA-SERIES** The H and HA series with 50 mm blade stroke can be produced in many sizes between 350 and 1500 mm, and can also be custom-shaped to fit a specific hull design, such as a propeller tunnel or speed rails. Typical vessel size, 29ft(9m) to 165ft (50m)
- **HE AND HAE-SERIES** When more lift force is needed, the HE and HAE series with 75 mm blade stroke are used. Sizes range from 400 to 1500 mm and can also be custom-shaped.
- **HL-SERIES** Our HLS (Humphree Large Series) may be the right choice for 50 to 150m vessel size. This interceptor is designed for continuous operation with the ability to service without docking. The HLS blade has a powerful 110mm stroke length. Like most Humphree interceptors, the HLS can be custom shaped to suit almost any vessel.



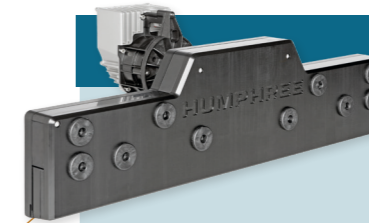
### CONTROL PANEL

- Large colour screen readable in sunlight
- Waterproof and with Night Mode Display
- Easy and intuitive to operate



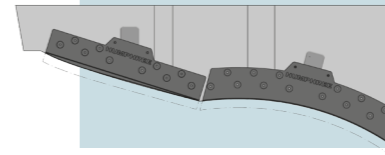
### CONTROL UNIT

- Real-time data processing
- Includes motion sensors
- Integrated power distribution, 12-24V



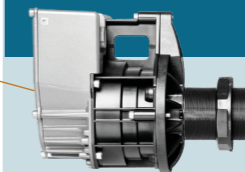
### INTERCEPTOR

- Robust design in corrosion-free composite materials
- Light and compact unit with low maintenance
- Available in a variety of sizes and types
- Easy to install



### Custom shape

It is common to customize the interceptors according to the vessel shape



### SERVO UNIT

- The heart of the Humphree systems
- Ultra fast 0.7 sec. full stroke for superior control
- Mounted inside the boat for accessibility and easy maintenance. Waterproof

# control systems

## HCS-5 boat control systems. For all needs.

The heart of the Humphree product is the advanced control system, developed over the years by marine experts together with demanding users. The Humphree technology makes the real difference on the waters, and it has never been easier to experience stabilization on your boat.

A range of auto functions for different needs is available, presented as function packages. The functions provide optimum comfort and performance regardless of whether the captain is a professional or a less experienced operator

Auto Trim functionality is included standard on our HCS-5 interceptor systems to ensure the lowest fuel consumption and the lowest impact on our environment.



### AVAILABLE FUNCTION PACKAGES AND INCLUDED FUNCTIONS

FUNCTION PACKAGES	INCLUDED FUNCTIONS					Recommended boat size
	Auto List	Pitch Stabilization	Coordinated Turn	Roll Stabilization	VMM	
COMFORT	✓	✓				All
COMFORT PLUS	✓	✓	✓			All
PROFESSIONAL	✓	✓		✓	✓	> 17m (55ft)
PROFESSIONAL PLUS	✓	✓	✓	✓	✓	> 17m (55ft)

- Automatic Trim Control included as standard in our HCS-5 systems.
- Professional Plus Package included as standard in our Fin Stabilization-system.
- VMM - Humphree Vessel Motion Monitoring offers real time seasickness index and impact data (G-force) presented in the LCD-display.

## Automatic Trim Control



**standard**

*The function Auto Trim is always included as standard in Humphree interceptor systems*

Accelerating and operating at different speeds means that the boat will run at various trim angles. In many situations this results in a poor trim angle, high resistance, bad visibility and reduced comfort. The Auto Trim Control makes sure that the boat trims perfectly at all speeds, thereby reducing fuel consumption and environmental impact. The operator can manually override the auto functions at any time if they choose.

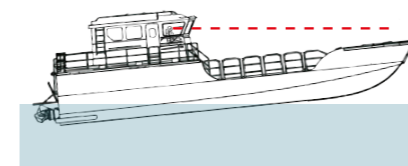
### Features

- Automatic control of running trim
- Easy set-up via the control panel

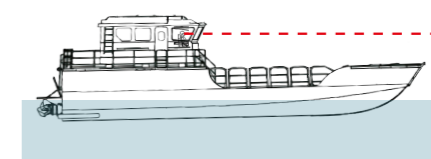
### Benefits

- Improved fuel economy, visibility and speed
- Less environmental impact
- Faster acceleration

WITHOUT AUTOMATIC TRIM



WITH AUTOMATIC TRIM



## Automatic List Control



TRIM 4.0°  
LIST 0.0°



**option**

Included  
in packages:

- COMFORT
- COMFORT PLUS
- PROFESSIONAL
- PROFESSIONAL PLUS

See page 6

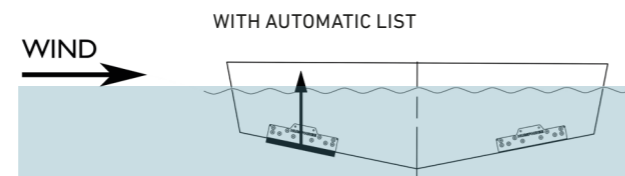
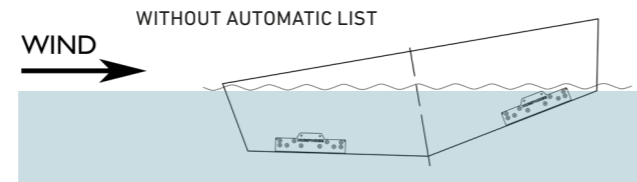
Uneven loading, crosswinds and varying conditions will normally cause the boat to list. When running on a straight course, Automatic List Control will bring the boat to even keel. The captain can adjust target list for specific sea conditions. Fifteen years of continuous improvement has resulted in numerous safety, comfort, and performance features, including smart entry into, and exit out of turns. During the turn, the system will allow the boat to heel naturally, and then re-engage as the vessel resumes a straight course. Everything is automatic, which allows the captain to concentrate on navigation.

### Features

- Automatic control of list
- Smart enter and exit of turns
- Adjustable list target angle

### Benefits

- Improved comfort and safety



## Coordinated Turn Control



TRIM 4.0°  
LIST 0.0°



**option**

Included  
in packages:

- COMFORT PLUS
- PROFESSIONAL PLUS

See page 6

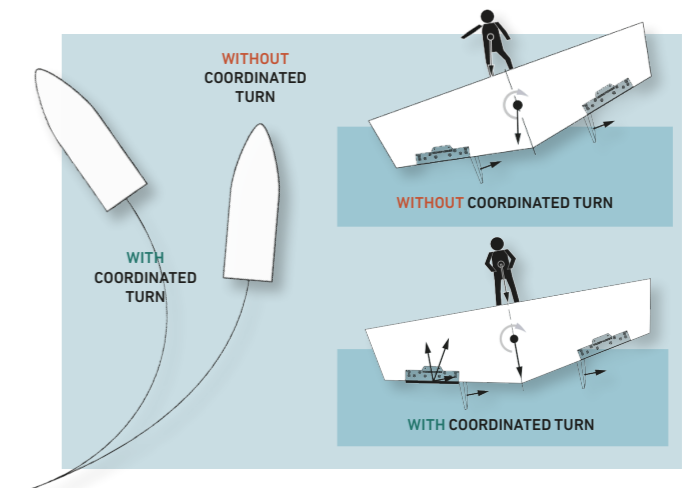
For most applications, on-board comfort and safety when turning can be significantly improved by correcting the boat heel angle through the turn. The Coordinated Turn Control monitors the rudder position and the interceptor blade is coordinated with rudder movement during turns. On top of greatly improved comfort, the boat will better maintain speed during the turn and a tighter turn can also be achieved.

### Features

- Automatic control of heel angle during turns
- Rudder position interface for most steering systems
- Easy setup in control panel for excellent performance

### Benefits

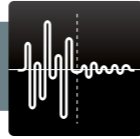
- Controlled heel angle during turns for improved comfort and safety
- Ability to make tighter turns
- Maintain higher speed during turns



## Stabilization Control



TRIM 4.0°  
LIST 0.0°



## Powerful roll and pitch stabilization

When in the open sea, boats are constantly exposed to waves which cause roll and pitch motions resulting in poor comfort on board. With the function Humphree Stabilization Control, and thanks to our ultra-fast servo motors, the large stroke interceptors are instantly actuated to counteract undesired motions.

Our sophisticated control system provides effective stabilization for any size boat operating at semi planing and planing speeds. Easy to operate by the user-friendly control panel. Using interceptor trim tabs for stabilization is extremely efficient since there is no added resistance or added weight to consider. This is unique among marine stabilization systems.

The function **Roll Stabilization** is included in the packages PROFESSIONAL and PROFESSIONAL PLUS.

**Pitch Stabilization** means that all interceptors are simultaneously adjusting to counteract any pitch movement and this function is recommended for boats 55ft and larger.

### Features

- Easy to install on new or used boats
- Functions available in packages

### Benefits

- Less roll and pitch motions
- Improved comfort and safety
- All-in-one system – Trim and Stabilization
- No added drag and no added weight

## premium option

### ROLL STABILIZATION Included in package:

- PROFESSIONAL
- PROFESSIONAL PLUS

### PITCH STABILIZATION Included in packages:

- COMFORT
- COMFORT PLUS
- PROFESSIONAL
- PROFESSIONAL PLUS

See page 6

# fin stabilizers

For monohulls and catamarans

## 24V DC customizable fin stabilizers

The NEW state-of-the-art 24V DC fin stabilizers deliver a game changing package and offer a number of benefits compared to what has been available on the market previously. With 24V DC, the system can be operated without keeping a genset engine running. These fins are mainly used on monohulls but can in some cases also be used on catamarans.

The main engine alternators will charge the batteries powering the system while underway, and, while at anchor, the system can operate for an extended time on battery power alone, using our power regenerating technology. Less noise, less fuel, less wear. Our QUAD function makes it just as easy to install four fin stabilizers on one vessel. Low draft, low weight.

**ALL SPEED STABILIZATION** The system provides full stabilization from zero speed all the way up to top speed. The sturdy servo actuators are also extremely compact and with the 24V power, no space-consuming hydraulic pumps or AC power modules are required. This also means an easier installation both for retrofits and new builds. Best of all, the system can be fully integrated with our interceptor trim tabs, meaning that roll, pitch and yaw motions are all controlled by one system. The Coordinated Turn feature provides greater comfort during turns by coordinating both fin and rudder movement.

**CUSTOMIZABLE** Depending on hull design, a rotating fin can interfere with something on the hull like the chine or a spray rail. It is therefore common that some modification is required. We listened to our customers and developed a unique design making it very easy to adapt the fin to the hull design. The top of the fin is made solid, which means that it just needs to be cut to the desired shape with no need for costly and time-consuming fiber glass work.

**STABILIZE STATIONARY WORK** The unique ability to rotate the fins 360° at zero speed provides a much more stable platform resulting in greater comfort and safety for everyone onboard.



## all speed STABILIZATION

Full stabilization from zero up to top speed. Suitable for vessel size from 50ft (15m) – 165ft (50m)

Fins available in five sizes:  
0.6m<sup>2</sup> • 0.8m<sup>2</sup> • 1.0m<sup>2</sup>  
1.3m<sup>2</sup> • 1.5m<sup>2</sup>

Function Package Professional Plus included as standard in our Fin Stabilization system

See page 6

# course stability

For waterjet propulsion

## Interceptor steering

For waterjet propelled vessels, monohulls and catamarans, HUMPHREE integrates Interceptor steering for improved course keeping and significant fuel savings. The traditional means of steering by redirecting the thrust force from the waterjet to keep a steady course can now be significantly improved with an assisting Interceptor steering. Not only the thrust losses from the redirection of the waterjet is cancelled but the controls of the vessel is improved due to a more direct response from the steering performance.

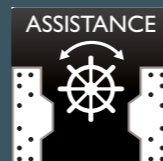
The interceptor will provide a steering force immediately once deployed and will give the vessel a much straighter course. The obvious and proven benefits are speed increase, fuel savings, better radius of turn, higher speed during turns and savings on waterjet steering gear. All appreciated by the Commercial operators. The fuel savings have been documented to be around 5%. In Navy applications the tactical diameter and advance is of strategic importance and will also be improved.

### Features

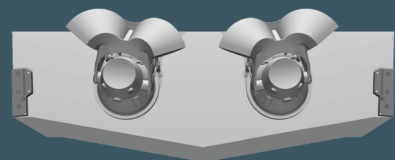
- Secondary boat steering system
- Integration with any water jet brand
- Integration with any autopilot

### Benefits

- Improved fuel economy around 5%
- Better course keeping saves time
- Less wear of waterjet gear
- Higher maintained speed while turning
- Improved turning radius



### Mounted on Mono hull



### Mounted on Catamaran



## Course stabilizing fixed fins

Many waterjet boats experience course keeping problems. This is due to the absence of a lateral underwater area which helps the vessel to keep its course. An added lateral area is most effective when installed in the very aft of the hull.

Having a wing profile fin provides a corrective force on yaw with minimum resistance. Humphree has developed a series of fixed fins which can be bolted to the hull. The bolts have been tested and verified to break off and keep the hull intact in order to limit the damage to the boat in case of hitting ground.



Read all about our world-leading stabilization solutions for commercial and navy vessels. Proven technology developed and manufactured in Sweden since 2002.

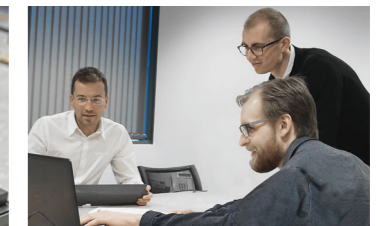


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## House of Humphree

Humphree was founded by a team of hydrodynamic engineers and marine engineers, active in the field of high-speed marine propulsion and ship hydrodynamics since the early 1990s. The company was established in Sweden 2002 with the mission to provide and develop innovative products and services to the market. Packaging our knowhow in hydrodynamics, electronics and digital control onto products easy to use and install. We are 100% committed to delivering products and services that out perform all others. Our commitment enables boat builders to stay ahead of their competition, and provides the boating community the safest, most comfortable, boating experience possible.



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