

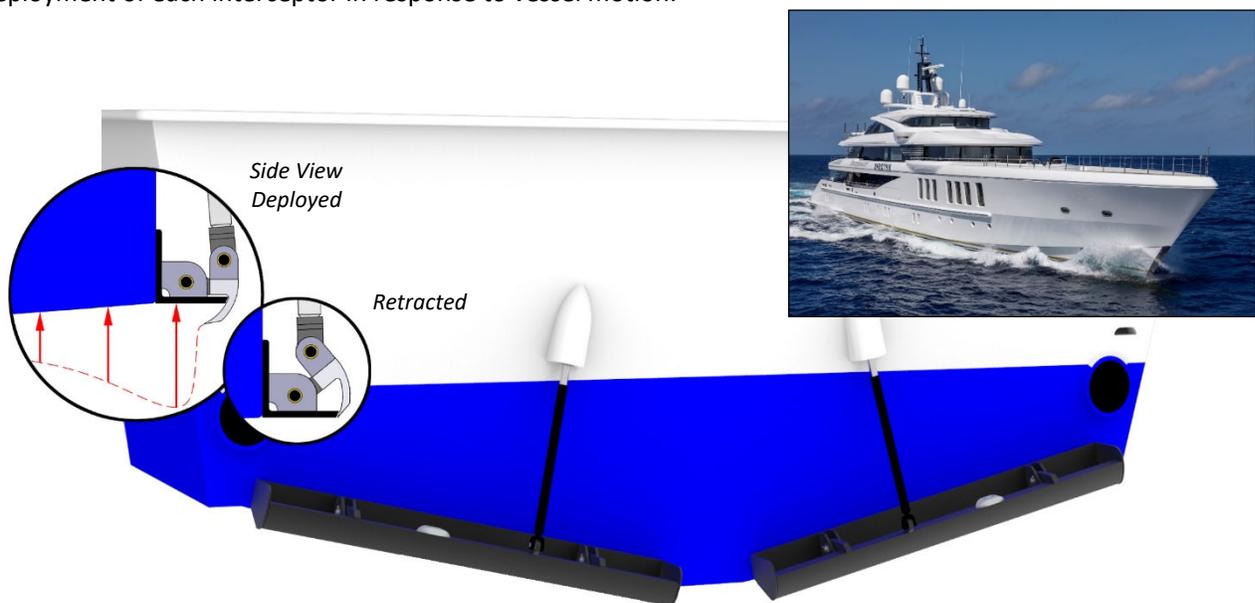
Active Motion Interceptors

Total Ride Control[®] System for High Speed Vessels

Naiad Dynamics[®], the World Leader in Ship Motion Control Solutions[®], introduces the Motion Interceptor Ride Control System: a low cost, low power consumption, low weight motion control system for high speed (20 to 60 knot) vessels from 10 to 100+ meters (30 to 300+ ft.). The system provides fully automatic and simultaneous control of dynamic roll, pitch and heave motions, and continuously optimizes heel and trim for improved comfort, seakeeping, speed and fuel economy.

How Interceptors Work

Naiad's Interceptor Total Ride Control System consists of a pair of transom-mounted blades that are hydraulically or electrically actuated, and controlled by the proven Naiad motion control system. Interceptors generate an increase in pressure on the hull bottom directly ahead of the transom by intercepting the water flow to a greater or lesser degree in continuous proportion to vessel motions. The resulting forces make it possible to simultaneously damp both roll and pitch motions, and optimize running trim, by automatically varying the deployment of each interceptor in response to vessel motion.



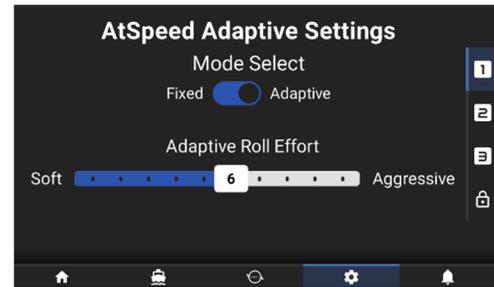
Compact & Lightweight

At speed, the interceptor blades are continuously modulated, extending only a few centimeters below the transom to generate forces on the hull equivalent to the forces produced by a trim tab or fin with much less risk of damage from floating debris or grounding. Because the Active Motion Interceptor requires very little movement to produce the necessary stabilization forces, the interceptor mechanisms as well as the hydraulic or electric power system are compact and lightweight. This makes installation relatively simple, especially for retrofits onto finished vessels.



Automatic Roll, Pitch, Trim and Heel Control

The NAIAD® Distributed Control Systems (DCS) features fully proportional closed loop performance, resulting in continuously modulated interceptor blade position management and smooth, exact operation. Operator interface is through a touchscreen display featuring an intuitive and easy to use system of menus and screens. Operators can use the gains settings to manually adjust the sensitivity or select the AtSpeed Adaptive mode to automatically optimize performance for changing sea conditions.



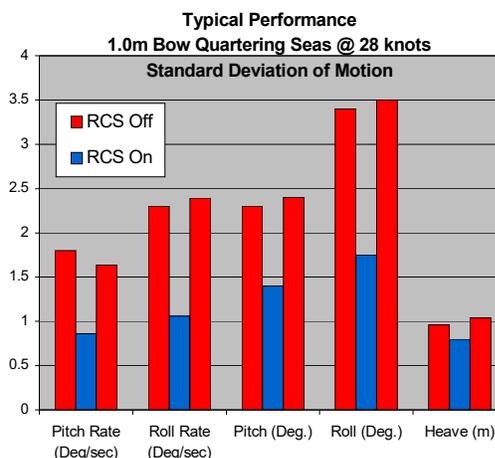
Proven Performance

Typical performance is depicted in the graph below; however, full-scale trials of the Motion Interceptor Total Ride Control® System have documented a 70% reduction of pitch angle and a 57% reduction of roll angle. In addition to pitch and roll reduction, the system automatically corrects static heel or list, and optimizes the vessel's running trim. Although it seems counter-intuitive that intercepting water flow with a blade will not increase drag, optimizing trim and reducing motions with Naiad's Active Motion Interceptors has been documented to actually **increase vessel speed and fuel efficiency**.

Wide Ranging Applications

Naiad's Active Motion Interceptor technology was pioneered by Naiad Dynamic's naval and commercial marine experts, (formerly MDI). These systems have been proven in demanding applications ranging from:

- 11m, 50-knot Special Forces RHIB yielding dramatic reductions in vertical accelerations.
- 54m, 32-knot monohull Crew Supply vessels optimizing trim, reducing pitch & roll, while achieving 5% fuel savings.
- 72m, 38-knot catamaran Alaskan Ferries, reducing pitch, roll and heave.
- 115m, 47-knot monohull US Navy Littoral Combat Ship optimizing trim, reducing pitch & roll and increasing speed.



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