



KONGSBERG

HIGH SPEED BOAT SIMULATION TRAINING SYSTEM

K-Sim[®] Fast Craft

Enhancing Training for High-Speed Tactical Boat Operations

K-Sim Fast Craft Simulator provides an immersive, realistic training environment for high-speed navigation, boat handling, and tactical operations. Engineered to meet the intense demands of high-speed boat operation training, K-Sim Fast Craft enables safe, effective, and repeatable training sessions, reducing risks to personnel and equipment.

Unparalleled Realism with Advanced Hydrodynamic Modelling

Powered by an advanced physics engine, the K-Sim Fast Craft simulator closely replicates the behavior of high-speed vessels. This cutting-edge simulation technology accurately models boat dynamics, wave interactions, stern wave effects, and impacts with other objects—delivering an authentic training experience that enhances skill development and operational readiness. The simulator is scalable - choose between generic or custom hydrodynamic models, each created from real vessel performance data and validated for accuracy.

Benefits of K-Sim Fast Craft Simulator:

- Enhanced realism in high-speed vessel handling and maneuvering
- Repeatable, cost-efficient training scenarios
- Reduced risk for personnel and equipment

Rising Demand for Advanced Training

As operational requirements and equipment capabilities evolve, the demand for efficient, high-quality training for defense, law enforcement, and professional boat operators is growing.

However, opportunities for live training with operational equipment are often limited due to concerns about personnel safety and equipment wear, risks to operational security, and restricted access to heavily utilized platforms.

These challenges underscore the need for advanced simulation solutions that provide realistic, repeatable training in a controlled, risk-free environment.





Realistic and Cost-Efficient Training for Tactical Readiness

K-Sim Fast Craft enables highly realistic scenarios-based training that covers essential competencies:

- Basic and advanced training
- Decision making and development of strategy
- Tactics and procedures
- Validation of concepts of operations
- Mission rehearsal
- After-action review

Designed to meet the demands of modern naval warfare and law enforcement, K-Sim Fast Craft's near-real environment increases training efficiency and effectiveness, improving crew selection and readiness.

Immersive and Scalable, Real-World Operating Environment

K-Sim Fast Craft is scalable and can be delivered with an advanced motion system with three to six degrees of freedom accurately simulating vessel behavior across speed ranges and sea states. The motion platform is tailored to reflect the boat's propulsion system (water-jet, surface drive, stern drive and outboards) and hull characteristics, providing a lifelike training experience.

The visual system can be delivered from 270 to 360 degrees field of view and the low-radius, cylindrical visual projection system offers an expanded field of view, enhancing realism and visual immersion.

The Ultimate Training Environment

The console layout replicates real operator positions, with integration options for authentic controllers, indicators, and displays such as:

- Navigation systems with the same control units as used on-board
- Force feedback steering wheel and propulsion levers
- Engine start/stop switches and monitoring with soundscape
- Electro-optic equipment and search light
- Remotely operated weapon controls
- Communication equipment

User-friendly Instructor System

The simulator includes an award-winning* instructor system, featuring an intuitive, drag-and-drop interface for exercise creation. This advanced tool provides full monitoring and assessment capabilities, enhancing the quality of training with automatic recording for exercise review and feedback.

Training provided

The simulator solution supports the full range of training within boat operations; from basic familiarization training to advanced operational related training at the operator, crew, team and squadron levels.

Boat handling and navigation

- Boat and equipment familiarization
- Basic to advanced high-speed navigation
- Basic to advanced boat handling and manoeuvring
- High-speed tactical manoeuvres and interception

Tactics, techniques and procedures

- SOP/TTP development and training
- Operator and bridge team procedures
- Maritime Interdiction Operations
- Search and Rescue operations
- Davit operations / launch and recovery
- Boarding operations
- Escalation of force and weapon engagement

Rehearsal of concepts and operations

- Mission planning, rehearsal and debriefing
- Rules of engagement training
- Scenario based operational decision making
- Realistic scenarios with actual impact calculation

Comprehensive Tactical and Weapons Training

K-Sim Fast Craft includes options for integrated weapons training, supporting multiple weapon types and tactical scenarios. This capability allows maritime organizations to train crews in a wide range of operational tasks, from high-speed navigation to realistic weapons engagement, meeting the full spectrum of mission requirement.



K-Sim Fast Craft features multiple weapon training capabilities



* Instructor System with Award for Design Excellence from the Norwegian Design Council

Adaptable for Diverse User Segments

K-Sim Fast Craft is an ideal training solution for various organizations that require high-speed operational capabilities, including:

- Special Operations Forces
- Coast Guards Navies
- Search and Rescue Organizations
- Marine Police Forces
- Pilots
- Customs and Border Patrols
- Fire Departments
- Maritime- and Fast Rescue Craft training providers
- Ship builders and manufacturers

Case Studies: Meeting Exact Training Requirements

KONGSBERG's range of simulator systems is based on in-depth understanding of the learning process. All simulators provide highly realistic training scenarios and can be customized to fulfil specific training requirements.

Singapore Police Coast Guard

Our largest simulator contract to date was with the Singapore Ministry of Home Affairs, supplying four K-Sim Tactical Boat Handling Simulators to the Singapore Police Coast Guard (SPCG). These simulators replicate different boat types and integrate weapons capabilities, enabling comprehensive tactical training. SPCG's facility supports fast interception and high-speed maneuvering exercises in a highly realistic simulated environment.



The Royal Norwegian Navy's Skjold class Corvette is one of the fastest warships in the world with a capability of speeds above 60 knots.

The delivery combines existing state-of-the-art software functionality with new customized vessel models including replication of the vessel hull, hardware and instrumentation as found on board, an immersive projection system and additional functionality supporting the Coast Guard's training objectives. The solution is pushing the technology to achieve an entirely new level of hydrodynamic capabilities.

Royal Norwegian Navy

For the Royal Norwegian Navy, we have provided a custom 1:1 simulator of the tactical bridge system aboard the Navy's Skjold class Corvette, one of the world's fastest warships. With a capability of speeds above 60 knots, the bridge team is subject to very strict requirements for safe navigation.

Built on the unique K-Sim technology, this simulator enables the Navy to train under conditions that would be difficult to replicate in live exercises due to speed and safety considerations, offering both safety and cost-efficiency.



They are using a customized Kongsberg Digital simulator solution, which is a 1:1 simulator replica of the tactical bridge system on board the Skjold class Corvette.

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