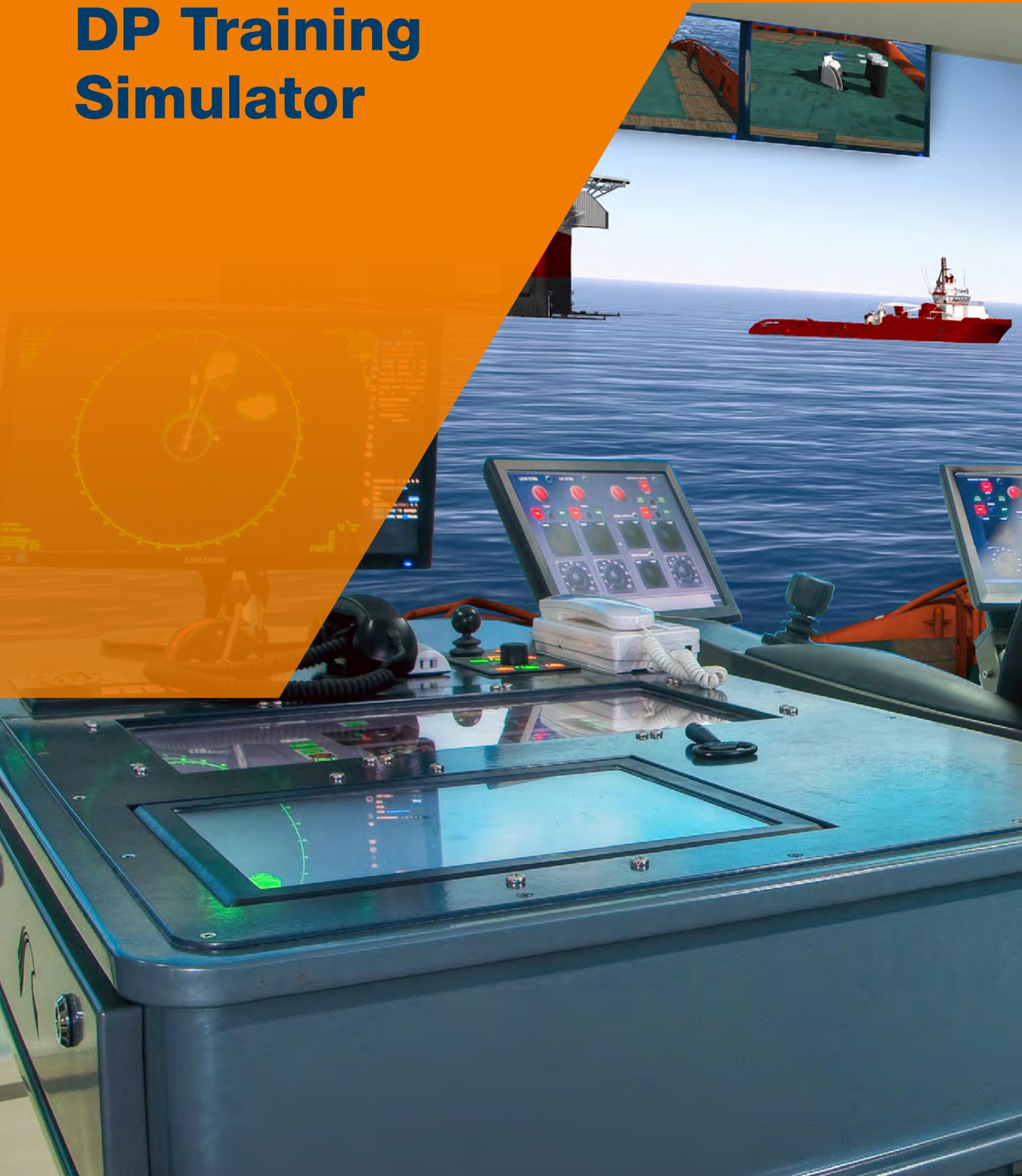


DP Training Simulator





DP Training Simulator – a Navi-Trainer Professional Module

The maritime industry faces a rapid increase in its need for certified Dynamic Positioning Operators (DPOs). This creates a demand for DPO training according to the Nautical Institute and DNV SeaSkill training schemes. The DP (Dynamic Positioning) simulator plays a vital role, with the highest level training significantly reducing supervised DP watchkeeping time onboard. This reduction is an attractive operational and financial factor for many operator companies.



DP Training Simulator

Meets and exceeds the requirements of both Nautical Institute and DNV SeaSkill schemes for DPO certification.



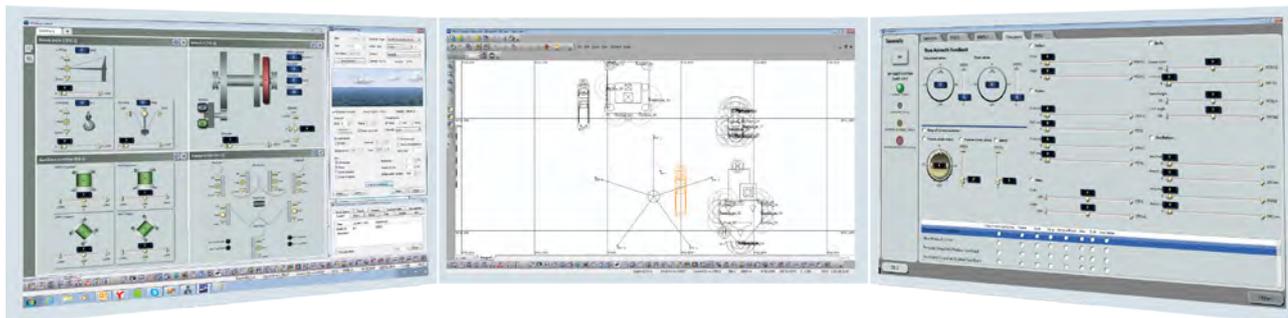
Simulated DP Systems

Using our universal DP interface, many of the key DP brands can be interfaced to a high level including data transfer of multiple sensors, position reference systems, thrusters and power management, each meeting the requirements of the different class societies. To date, the following brands have been successfully connected to the NTPRO simulation platform:

- Wärtsilä DP
- General Electrics
- Marine Technologies
- NAVIS.



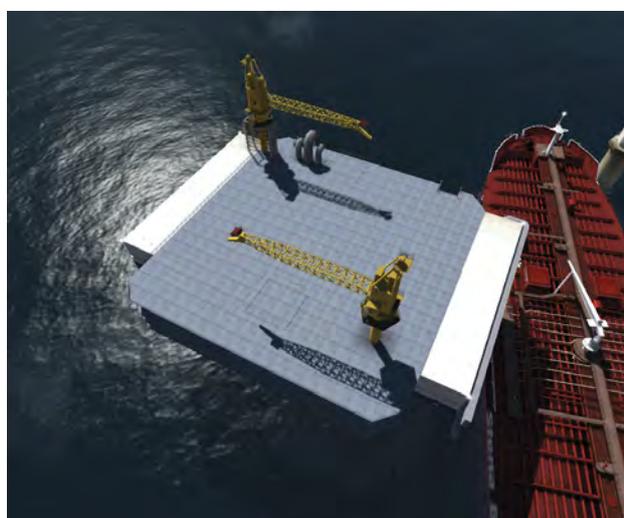
Instructor Capabilities



DP training focuses significantly on operational procedures for adverse events, which are complex and dangerous to train at sea. Our team has developed a dedicated Instructor DP Panel for monitoring and introducing of faults to the DP related equipment. The instructor can introduce faults and errors for any equipment, including frozen pitch, poor GPS coverage, low UPS battery and even blackouts. All parameters are recorded in a log file for debriefing and playback which also may include audio and video recording of the trainees' actions.

Visual System

NTPRO 5000 is renowned for its unrivalled visual realism. Many of the DP operations occur in close proximity to other vessels and structures. We have paid special attention to this, creating a wide range of highly detailed DP and offshore objects, such as SPMs, TLPs, SPARs, Drillships and FPSO's. Visual thruster wakes and dynamic shadows give the trainee valuable feedback during critical operations. Correct and realistic visual effects are important in training, not least for increasing awareness among the trainees. Both DNV and the Nautical Institute require visual scenes for Class A and B simulators (NI requirements for Class B came into force in 2014).

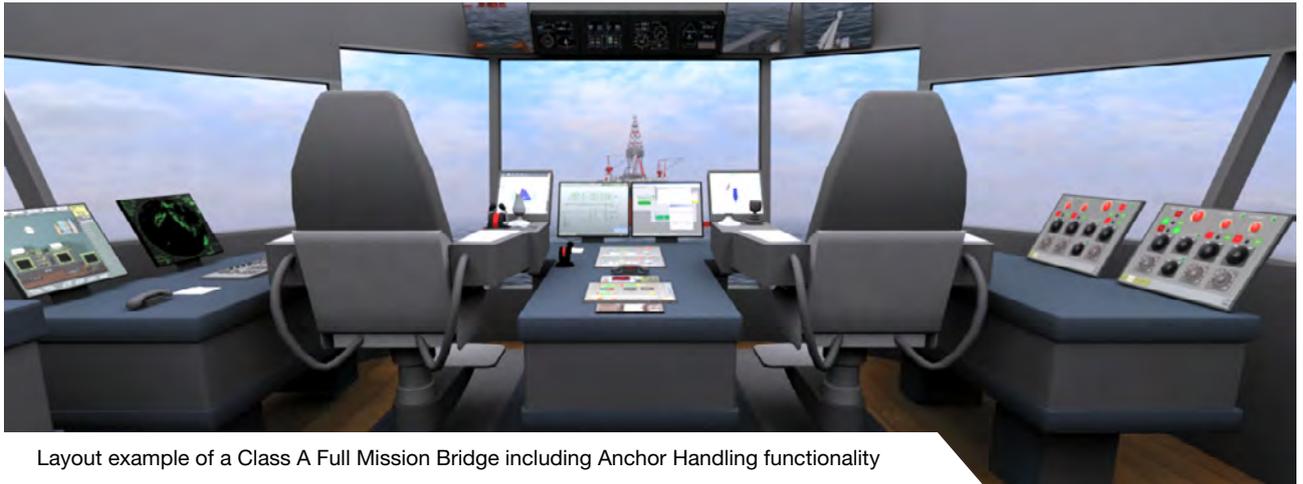


Configuration: Three Levels of DP Bridges

To make things easy, we have created three DP packages that correspond to the three DP simulator simulator classes set by DNV and the Nautical Institute. The packages can be equipped with any of the supported DP brands, and the simulator can operate different brands at the same time. The suggested levels are only for guidance, customised solutions are always available to meet the needs of your organisation. Additionally, add-on solutions for existing simulators are available.

Class A Configuration

For sea time reduction courses



Layout example of a Class A Full Mission Bridge including Anchor Handling functionality

This full mission DP2 bridge configuration is designed for Sea Time reduction courses (Class A), task rehearsals and resource management training. It includes both extensive horizontal and vertical visual view, physical controls for all thrusters and rudders, and all relevant navigational equipment such as ARPA/Radar, ECDIS and communications. It also contains operator interfaces for the Positioning Reference Systems and a Joystick Backup System. The bridge can be designed as a forward and/or aft looking bridge to accommodate the intended operations.

Class B Configuration

For advanced/simulator courses

This configuration is primarily used for the advanced/simulator course (Class B). A bridge solution is set up in a ship-like manner with a visual scene accommodating the intended DP operations. The instructor controls the scenarios from the Instructor station where faults, errors and environmental conditions are set.



Layout example of a Class B bridge

Class C Configuration

For basic/induction courses

This configuration is mostly used for Basic/Induction and DP familiarisation (Class C). This desktop solution is ideally located in a classroom where trainees operate independently from each other. The standalone trainee workstation includes DP screen, control panels and PCs depending on DP brand.



Layout example of a Class C classroom

Combined Class C and B Configuration

This configuration is a cost effective solution that can be used for both Basic/Induction and the Advanced/Simulator course. The DP workstations can be configured to be DP 1 or DP 2 stations. Example: if the training centre has six DP 1 stations, they can use those stations to create 3 x DP 2 workstations. The classroom will be equipped with the typical Class B related equipment for the simulator course. The same equipment can also be used during the Basic course thus creating a more stimulating trainee environment.



Layout example of a combined Class C and B bridge

Positioning Reference Systems

NTPRO 5000 simulates several absolute and relative reference systems:

- GNSS and DARPS
- Radar
- Laser Radar
- Microwave Radar
- HPR (USBL/SSBL and LBL).

All DP and Offshore related objects are fitted with relevant reflectors for the respective reference system. The position of the reflectors can be adjusted by the instructor.

The simulator bridge can also be fitted with Operator Interfaces for the reference systems.



DP Own Ship Models

To be able to perform the required DP operations, Wärtsilä offers a wide range of high fidelity DP own ship models with different propulsion and configurations, including:

- PSVs
- AHTSs
- MPSVs
- Shuttle Tankers
- Semi Submersibles
- Cruise ships
- Cargo vessels.

Wärtsilä and our DP partners are always available to respond to requests for cost-effective implementation of new DP models.

Additional Offshore Functionalities

As NTPRO 5000 is the common platform for all bridge operation modules, our customers can add extra features such as Anchor Handling, Cargo Transfer, Oil Spill Response and Ice Operations to their simulator and training syllabus at any time.



Training Consultancy Services

A simulator often represents a significant investment that needs to generate an income. To speed up the return on investment, we offer the full support packages with lesson plans, exercises, Powerpoint presentations and instructor development for different kinds of training including Dynamic Positioning and Anchor Handling.

Typical Support Packages:

- Nautical Institute accreditation support
- Class Society certification support
- Local program approvals.

Our training consultants are highly skilled in DP and Anchor Handling training, course administration and Nautical Institute technical auditing.





Wärtsilä is a global leader in smart technologies and complete lifecycle solutions for the marine and energy markets. By emphasising sustainable innovation, total efficiency and data analytics, Wärtsilä maximises the environmental and economic performance of the vessels and power plants of its customers.

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