NAVIS ENGINEERING

NavDP4000 Series
Dynamic Positioning Systems

Keystone

Since the first experience of the company founders in early 1980s in the area of the automatic control system for hovercraft, type of the ships with much faster dynamics comparing to majority of the offshore vessels we keep our focus on area of controlling vessel motion.

Library of more than 100 six-degrees-of-freedom mathematical models of vessels was created during next decades and now is used in training centers all over the world as a part of full mission ship handling simulator by one of the world's leader in this area.

This experience and fundamental knowledge of the subject was the base for the successful launch of the first DP system in the year of 2000.

More than 600 DP systems now serve our customers on board of the ships in major oil and gas offshore development areas.

Besides the offshore area we propose DP systems for variety type of ships in many other segments of marine industry.

Major asset

Understanding the nature and complexity of your business we offer our expertise and knowledge to help you in execution of your projects.

For each type of ships in many segments of marine industry we offer DP systems engineered to your specific operational needs or requirements.

That allows us to solve your demanding tasks and manufacture reliable equipment with one of the best performance in class.

Depth of experience

Dynamic positioning is becoming a very useful tool in many segments of marine industry.

We have a broad experience in control of ships performing non typical offshore tasks, such as:
- wind farm support vessels;
- fast crew boats;
- cruise and ferry ships;
- ice going ships;
- and many others.

Accurate vessel mathematical models and unique algorithms help us to keep the position of the vessels with fast dynamics, specific limitations or in cases when rapid reaction from the system is required.

For each non-typical application we provide DP system fully complying with your requirements in respect of safety, reliability, functionality and usability.

Key strengths

The fastest algorithms on the market

NavDP does not need stabilization time before start of DP operations and working immediately from turning on.

Custom control modes even for single ship

Vessel specific modes and functions can be designed with captains and project managers.
If you have complicated design with not typical configuration or specific requirements — just let us know.

The simplest user interface

System features the simplest user interface on the market lowering the barrier to entry for the operator unfamiliar or having limited DP experience.
With voice alerts system helps to prioritize actions during critical moments of operations.

The most compact system on the market

We currently have the most compact system on the market due to touch-screen display and simple control panel, in terms of footprint on the bridge.

Reliability and unique stability

We provide in-house hardware-in-the-loop test of every single system delivered (even DP0 no class).

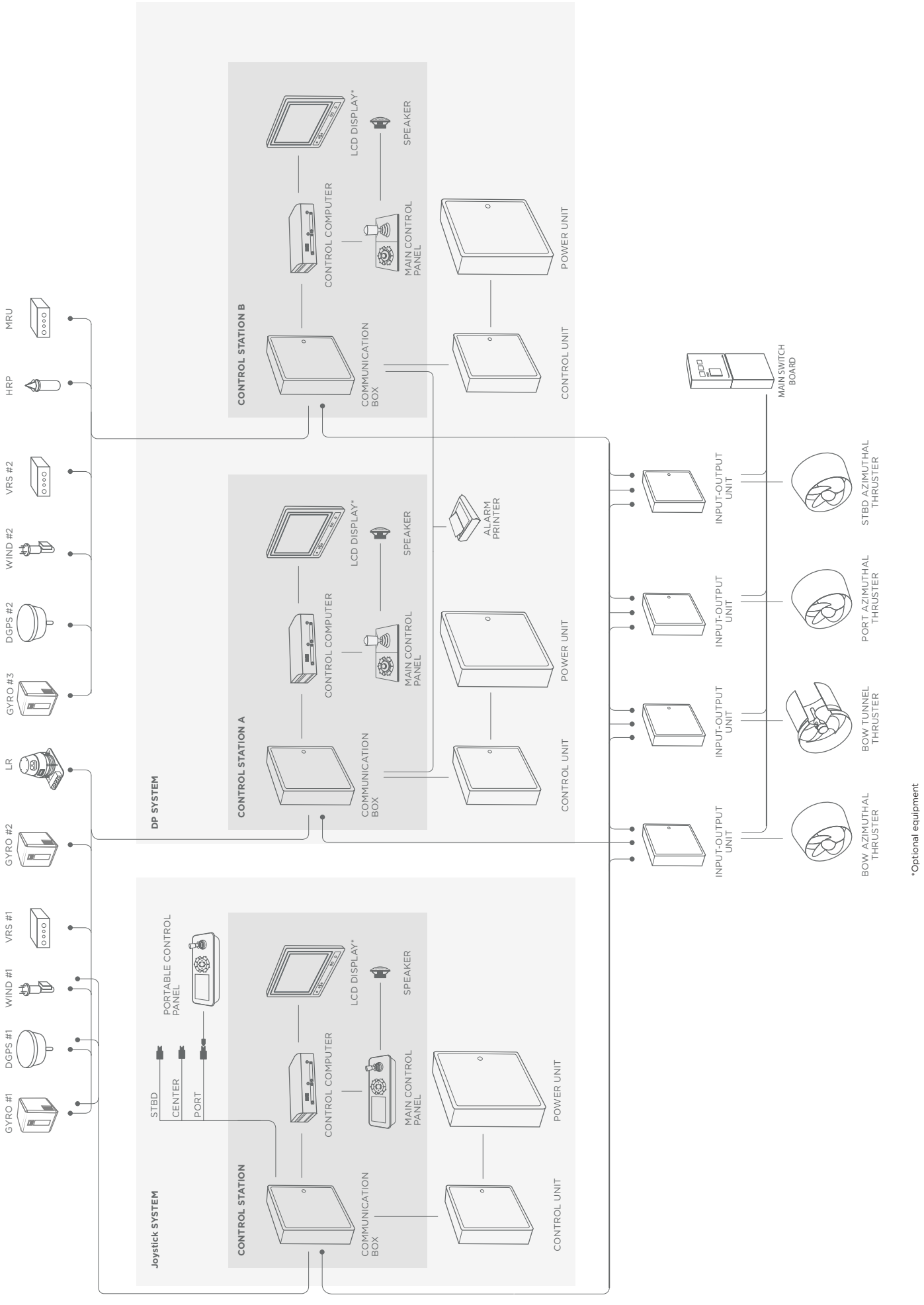
Smooth vessel control in rapidly changing environment and in case of various actuator faults

Special Thrust Allocation Logic algorithms handle single and multiple actuator faults providing dynamically the best allocation for available thruster layout and optimal usage of the power and propulsion.

Set of fuel saving modes

Set of fuel saving modes is available for applications where it is possible to decrease accuracy of position keeping and as an exchange reduce fuel consumption.

Transparent and predictable cost of system ownership



An example Navis NavDP system configuration

Pioneering technologies

2002 - The first in the world water-jet driven crew boat controlled by NavDP;
2008 - DP2 solution for crew boat with 4 fixed pitch propellers delivered;
2012 – the first DP2 system delivered for fast support intervention vessel (FSIV) with two step gearbox;
2014 – the first FSIV with hybrid propulsion equipped by NavDP;
2015 – the first ship ever built with an oblique hull and three asymmetrically located thrusters fitted with NavDP;
2016 – NavDP installed onboard the world's most technologically advanced tug boat with revolutionary propulsion system;
2016 – NavDP system successfully commissioned on board of the new dual fuel icebreaker.

Commissioning and sea trials

We have all necessary tools to provide quick response for service calls:
- own service team;
- network of service partners to assist you in the most remote locations;
- remote system diagnostics;
- possibility to upgrade software and calibrate system remotely;
- extended data logging.

Having perfectly pre-tuned system and checked documentation we can provide fast commissioning for the yard and very stable system for the owner. Bearing in mind small number of failures due to extensive tests at manufacturing facility, we can keep compact service team comparing to the rest of the companies in the industry.

Training

We provide dynamic positioning related trainings in accordance with latest IMCA recommendations to give deep knowledge of our system.

The following training resources can be provided for your needs:
- DP maintenance trainings for on-board staff ;
- familiarization courses for DP operators;
- fully functional portable DP Tutor for onboard or office installation;
- DP simulators - stand alone or part of the full mission bridge simulators.

Besides the courses in our facilities it is also possible to provide vessel-specific training in your designated place or onboard the vessel.

Service where it is needed

We offer you a comprehensive technical support throughout all life cycle of your project:
- initial ship inspection;
- pre-project services;
- vessel specific system design;
- project services;
- class approval;
- commissioning;
- sea trials;
- post sea trials development;
- crew training;
- worldwide service.

Worldwide service support by own offices located in main hubs and with service partners even in quite remote locations.

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