

QUALITY IN COMMAND - SINCE 1937

# HAPTICS



**KWANT CONTROLS**  
s n e e k - h o l l a n d

# CONTROL LEVERS WITH HAPTICS

Since the beginning of Kwant Controls, there has been a continuous focus on the development of nautical instruments, always with the aim of increasing safety and improving operations at sea.

Driven by safety, reliability and experience, our products are of the highest level of quality. Our technology is installed at seagoing vessels such as cruise ships, offshore vessels, ferries, naval vessels, dredgers, (super)yachts and many more.

For more than 80 years, as one of the world's leading manufacturers of nautical control levers and propulsion control systems, we have always focused on combining innovation with proven technology. To illustrate, we have realized developments such as the motorized levers, so that a bumbless transfer of commands is possible. Nowadays, this development of Kwant Controls is widely applied at ships.

With our drive for innovation, we have taken this to the next level in order make the controlling of ships safer, more reliable and more sustainable by introducing the next generation of haptics. This development was done together with captains, machine builders and system integrators to ensure seamless connection of control lever haptics with the application onboard.

## Control Levers with HAPTICS – the human sense of touch & movement

We are proud to introduce the next generation of haptic control levers build on proven technology. As the successive generation of motorized control levers, this next generation achieves even higher levels of the fully integrated sense of touch and movement (haptics). The embedded high performance haptic control algorithm and technology enables bi-directional interaction with the operator.

This next generation of innovative high-end haptic levers of Kwant Controls provides the following features, all completely programmable:

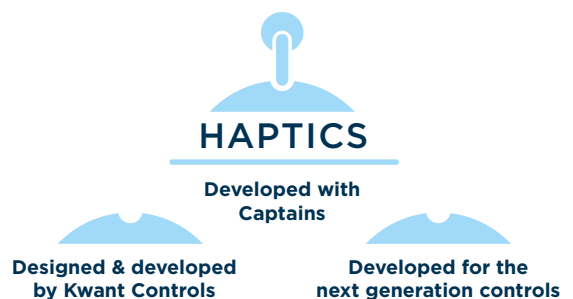
- Improved and customizable detents
- Force feedback and spring-return
- Forbidden zones and restricted area's
- Dynamic friction (counteracting and contributing)
- Guidance
- eClutch
- Vibration (on rhythm and frequency)

## All haptic features could be extended/assisted with:

- Illumination
- Acoustic sounds
- Personalized configurations

## These features support new applications such as:

- **Fuel efficiency;** awareness on most efficient speed/ acceleration rates, e.g. force feedback
- **Safety;** applying lever guidance in e.g. autopilot or joystick mode
- **Efficiency;** in hybrid modes transfer by "displaying" mode transitions via haptic patterns



All of the above and more, with the aim of further improving human machine interface and safety at sea.

## OUR CERTIFICATES

