

# VectorProp

The efficient propulsion and steering system

## New propulsion and steering system

**VectorProp** is a combined surface-piercing propeller, and integrated intelligent control system, which does away with the need for a rudder.

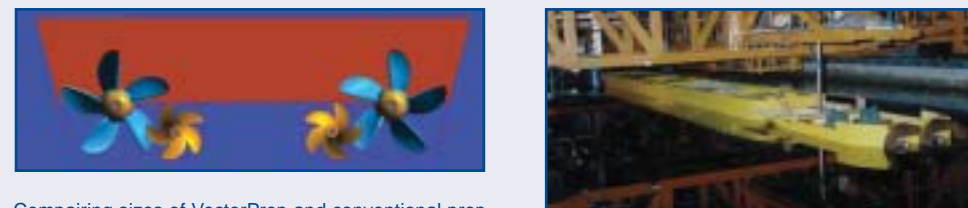
**VectorProp** is particularly effective at low speeds and in shallow water, as the system allows safe and efficient manoeuvrability. Tight turns and traversing are extremely easy, and is as familiar as if the vessel was fitted with a conventional propeller, rudder and bow thruster, but with greater manoeuvrability and ease of use.



## Greater efficiency

It is well known that a large diameter, slow rotating propeller is highly efficient. Extensive tests, both in models and in practice, have shown a significant increase in efficiency and fuel savings of between 20 and 40 percent, compared to conventional propulsion systems.

**VectorProp** is able to operate simultaneously with high thrust at low speed and at full power.



Comparing sizes of VectorProp and conventional prop

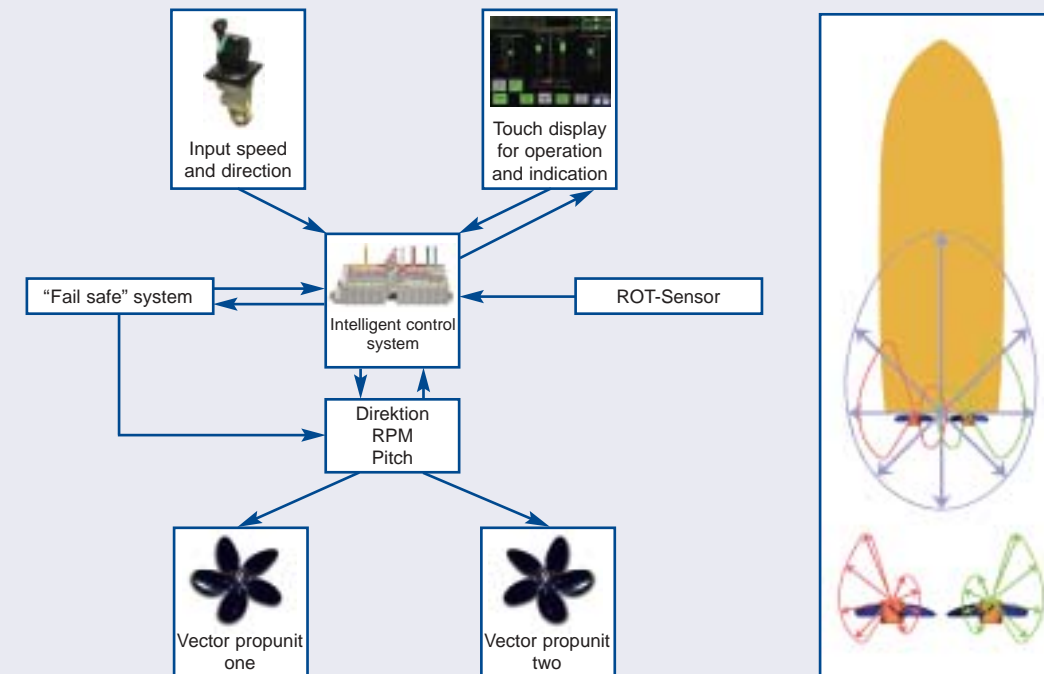
## Intelligent control

A surface piercing propeller, apart from generating forward propulsion also produces a sideways thrust. This is used to steer a vessel.

**VectorProp** also produces a sideways thrust and by arranging the propellers in pairs and the by changing the rpm, the direction of the propeller rotation as well as the pitch of the blades, **VectorProp** can steer a vessel in any direction.

An onboard display simultaneously shows the virtual rudder position as well as the propeller settings.

The skipper can also choose between either a touch screen or a conventional display to enable him to become familiar with the "look & feel" of the system. The integrated "Failsafe" emergency management system and rudder ensures that the system will operate at all times.



Functional diagram of the control system Propulsion

steering forces on VectorProp

**VectorProp** is very robust and needs very little maintenance, though this can be carried out without docking, as the propellers are easily accessible. The propeller blades are made of high strength composite material. The shallow draft, as well as the slow propeller rotation and suction, minimises propeller damage through grounding or surface flotsam. No cavitation occurs due to the low circumferential velocity and blade ventilation.

**VectorProp** can either be mounted to the ships stern in pairs or within the ships hull as a multiple system. **VectorProp's** draught is equal or even less than conventional drives.

**VectorProp** can be equipped with either an electrical or hydraulic control mechanism, consequently **VectorProp** is suitable to install with the standard diesel engine as well as a combined diesel and electric motor.

## Maintenance and repairs

## Application and installation