

# Disk-Drive Thruster

Compact hub-less thruster with integrated controller

The Hydromea Disk-Drive Thruster is a patented, very compact, direct-drive propulsion unit with integrated motor controller. The hub-less propeller design makes it robust to debris and eliminates the risk of stall due to strings and water plants wrapping around a shaft. The rotor is hydro-lubricated without any dynamic seals, making the design completely oil-free and pressure-proof.

The integrated motor controller has a CAN bus interface and performs brushless commutation and closed-loop speed control in both directions. Our proprietary sinusoidal commutation algorithm continuously monitors and optimises the motor timing parameters, resulting in smooth and efficient operation across the full speed range.

## Features

- Ultra-compact
- Thin, low-profile design
- Hub-less propeller
- Direct-drive, no gears or dynamic seals
- Pressure-proof
- Integrated sinusoidal motor controller with bi-directional closed-loop speed control
- Instant start and fast reversal for accurate attitude control
- CAN interface

## Applications

- Ideal as stabilisation thrusters for small ROVs/AUVs
- Low profile enables low drag for vertically mounted thrusters
- Deep-sea actuators



## Specifications\*

<b>Outer Dimensions</b>	82 x 95 x 14 mm
<b>Propeller diameter</b>	50 mm
<b>Max. Thrust</b>	25 N
<b>Weight in air</b>	135 g
<b>Supply voltage</b>	12-22 V
<b>Max. current</b>	21 A
<b>Interface</b>	CAN bus
<b>Depth rating</b>	6000 m

\* Preliminary specifications - may change without notice