

IMS.52 Pro

# Heading for New Shores





## Electromobility / Electric Boat Motor

# Cut Loose

For boat motors **electric mobility** has also been a trend for years. An outstanding innovation in the outboard motor market is the concept of Torqueedo which is based on brushless electromotors and integrated high-performance lithium-manganese batteries. Both in the USA and in Europe, the Torqueedo outboard motors were honored with major innovation awards: the IBEX Innovation Award from Miami and the METS Innovation Award from Amsterdam. When it comes to gear drives, the winner counts on IMS Gear.

- High efficiency
- Stable service life
- High flexibility & wide range of applications

With its modular system, IMS Gear's spectrum ranges from quick quality solutions to customer-specific adaptations and sophisticated special gear configurations. The same applies to our solutions for modern agricultural technology.

**“Due to the superior torque characteristic, propellers with the threefold efficiency of petrol engines can be used.”**

## Cut Loose

Torqueedo started the development of their electric boat drives with a standard planetary gear from IMS Gear's modular system. After the tests

of **efficiency, service life** and other performance data had proved positive, first discussions on customer-specific requests for modification followed.

## Immerse

In order to meet the **special operating conditions under water**, the output side was equipped with a special flange with two ball bearings for the exact bearing of the extremely long output shaft at the respective bearing distance and with a radial shaft sealing ring. In this way, the protection class could be increased to **IP65** while simultaneously preventing the escape of lubricants under water.

In order to also meet the request for a **minimum overall length**, Torqueedo adapted the motor end plates of their own motors to allow for the direct mounting of the gear to the motor without additional motor flange. Due to this modification, the gears are now ideally prepared for their new application without great effort.

## Speed up

The electromotors are available in the following versions:

- **Travel:** The Travel features a 2-stage planetary gear with a gear reduction of  $i=14:1$ . The foldable Travel 800 thus reaches the effective output of a 2-hp combustion engine.
- **Cruise:** The Cruise is operated with a 1-stage gear and a gear reduction of  $i=7:1$ . It reaches the thrust of a 6-hp combustion engine.

Torqueedo has been the first provider to refine the Torque engines - electronically commutated permanent magnet outboard motors - for the boat drive.



## Summary

**Making real progress on water: Via the planetary gear from IMS Gear, the torque is once more increased and transmitted to a three-winged propeller especially calculated for this use case. Due to the superior torque characteristic, propellers with the threefold efficiency of petrol engines can be used in these motors."**

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