

## Jefa Steering ES150 for Outboard Engines

A powerful and efficient electric steering system for outboard engines up to 200 hp.

### System Specifications

Steering type	Electric power steering
Max. outboard motor power	200 hp or 150 kW
Battery Voltage	12V DC
Standby current draw	0.1A to 0.3A
Peak current	30A
Operating temperature range	-25°C to +70°C
Storage temperature range	-40°C to +85°C
Certified in accordance with	EN ISO 25197:2018 and ABYC P-28

# ES150 for Outboard Engines System Overview

## Power, Precision & Reliability

The **Steering actuator** is the core of the electric steering system, delivering fast, smooth and highly accurate control of your outboard engine.

- **3-second hard-over-to-hard-over speed** for agile manoeuvring.
- **Integrated position feedback** via internal potentiometer for precise engine alignment.
- **Rugged marine design** with sealed shaft, corrosion-resistant materials and low maintenance requirements.



## Precise and Effortless Steering

The **Steerer** is the system's primary interface, translating helm movement into precise actuator commands. Designed to use the ¾" industry standard wheel attachment cone. It fits seamlessly with most steering wheels.

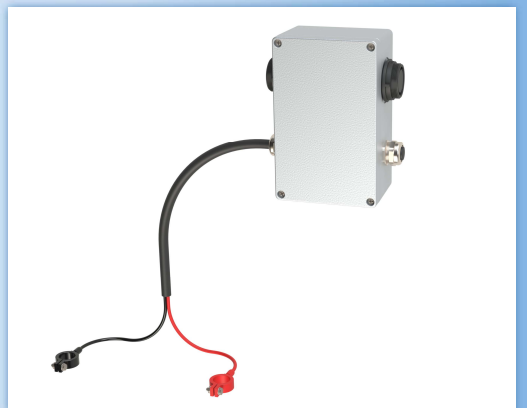
- **Integrated LED and buzzer** provide feedback during startup, at end stops or to indicate a system error.
- **Consistent, balanced steering feel** regardless of boat speed or engine power.
- **4-turn lock-to-lock steering ratio** for accurate control.



## Easy connections & Signal Integrity

The **Connection-box** is the central connection point of the system, managing power, communication and electromagnetic protection. It ensures clean, stable steering performance by filtering electrical noise and securely connects all components.

- **Centralised connection point** for actuator and Steerer, with the option to integrate with the outboard engine's kill switch if desired.
- **Multiple outboard engine setup** is made possible by connecting multiple EMC-boxes in series.
- **Integrated EMC filtering** minimises electromagnetic emission and guarantees reliable control signals.



# Easy Installation

The ES150 is easy to install, in three simple steps:

## 1. Steerer

Mount the Steerer in the helm station, secure it with four bolts and route its cable.

## 2. Steering Actuator

Attach the actuator to the outboard motor using the supplied hardware and connect the engine's steering arm.

## 3. Connection Box

Mount the connection box in a dry, safe location, connect it to power and plug in component cables.

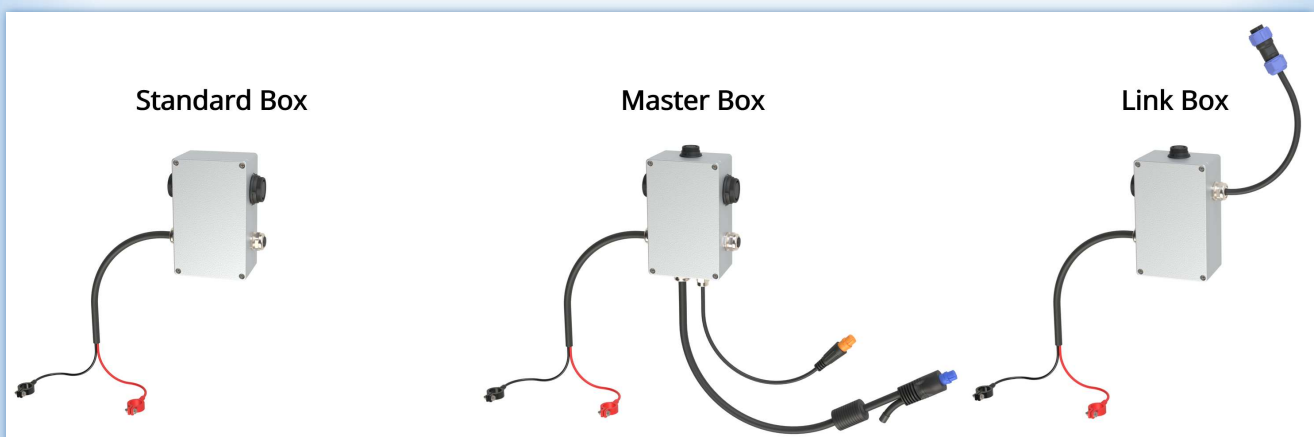
Once installed, power up the system and confirm that the actuator responds smoothly to steering wheel input.

# Customisable and expandable

The ES150 is an adaptable system that can be installed with most outboard engine setups. It comes with 4 meters long cables on both the Actuator and Steerer for connecting to the Connection box, and a 4 meters long power cable on the Connection box. This makes installation possible even when there is some distance between the engine(s), battery and helm station.

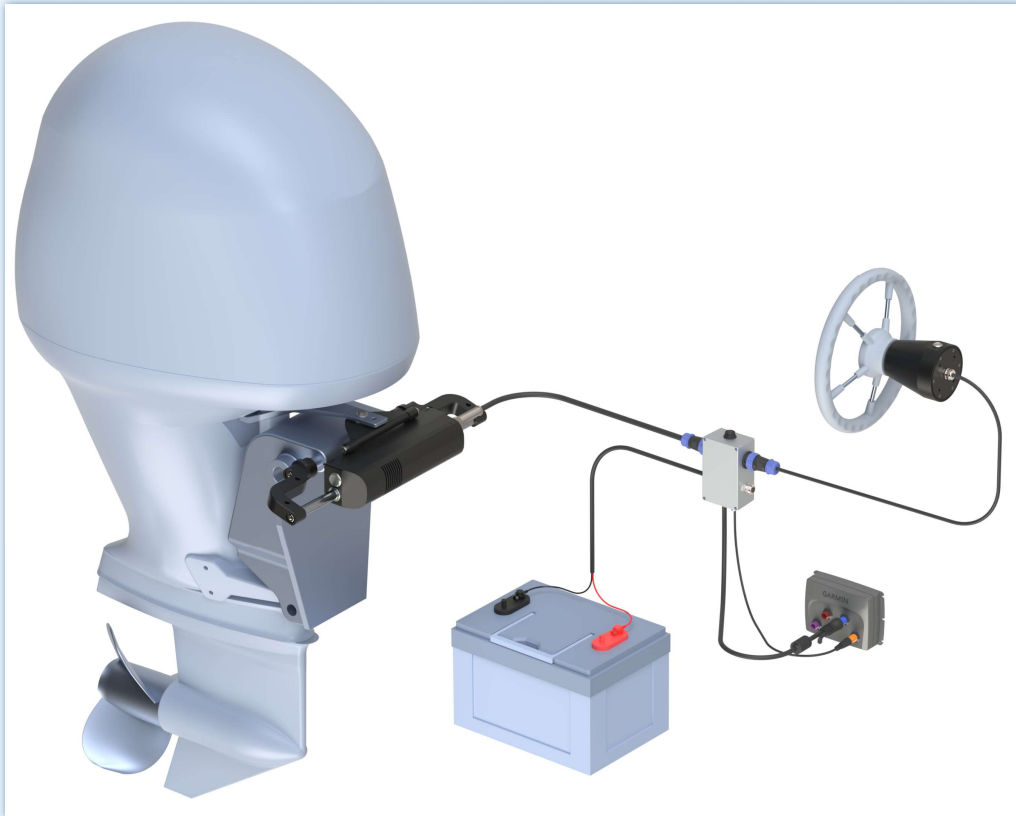
To accommodate systems with or without Garmin autopilot or systems with multiple outboard engines, we offer three variants of the Connection box, with alternative plug setups.

- The Standard box offers basic steering functionality for a single outboard engine, without the ability to connect to a Garmin autopilot.
- The Master box has the same connection points as the Standard box, with the addition of an additional contact for connecting a Link box and plugs for drive and rudder feedback signals for directly connecting to a Garmin autopilot.
- The Link box has a contact for connecting a steering actuator and a power cable, like the other connection boxes. It also has a plug for connecting to the Master box, or another Link box, and a contact for chain connecting additional Link boxes.

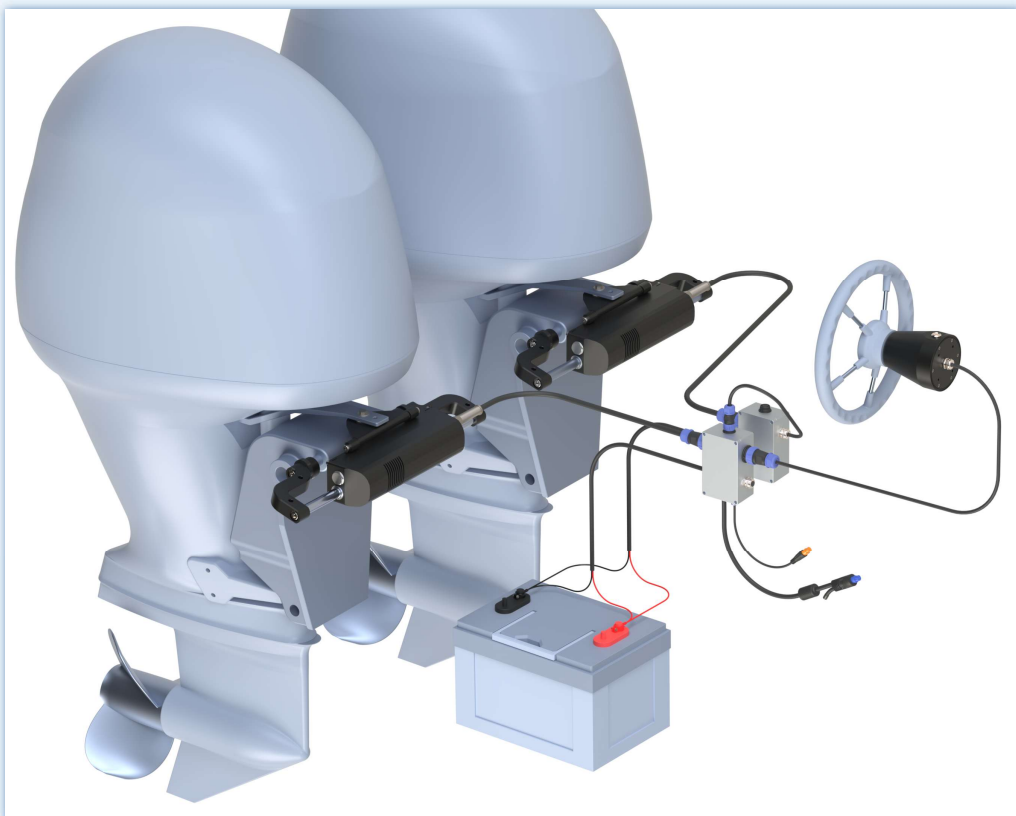


## Installation examples

Example showing the Jefa Steering ES150 installed with a Garmin autopilot (ECU), using the Master box.



Example showing the Jefa Steering ES150 with a dual outboard engine configuration, using the Master box and Link box.



# Steering Behaviour

## Standard Operation

The Jefa Steering ES150 operates similarly to a conventional steering system, turn clockwise to steer to starboard (right) and counterclockwise to steer to port (left). It will provide consistent and reliable steering regardless of boat speed or engine throttle.

## Shadow drive

For motoring with Garmin autopilot the Jefa Steering ES150 has a built in “Shadow drive” function. When the autopilot is actively controlling the steering system, you can take over control by moving the steering wheel. Then, after not having moved the steering wheel for 5 seconds, the Garmin autopilot will take back control and steer back to the set course. This enables quick and seamless takeover of steering control, while the autopilot is active.

# Purchase Options

The Jefa Steering ES150 has 3 different purchase options as listed below:

## Standard

The standard steering system, which offers basic steering functionality for a single outboard engine. This includes the Steerer, Actuator and the Standard box.

## Master





The same functions as the standard system with the possibility to connect with a Garmin autopilot and to connect a Link box for multi engine installations. This includes the Steerer, Actuator and the Master box.

## Link

This is an extension to the ES150 Master system, for boats with two or more outboard engines. Multiple ES150 Link systems can be chain-linked to one ES150 Master system. This includes the Actuator and the Link box.

# Contact Information

If you are interested in purchasing the Jefa Steering ES150 or should you require assistance with your system, please contact Jefa Steering A/S using the information below.

-  **Phone:** +45 46155220
-  **E-mail:** sales@jefa.com
-  **Website:** Jefasteering.com
-  **Hours:** 9:00 AM – 3:00 PM (CET)