

SE Electrofishers

SE 300 and SE 500



Why use an electrofisher?

Electrofishers allow for effective and humane collection of live fish. This may be necessary for: population analysis; marking fish with radio transmitters; massaging roe out of maternal fish for the breeding of fry; moving fish during adjustment of stream courses; and recovering fish after fauna pollution, e.g. spills or escapes from fish farming and industry.

EU rules require that fish populations be monitored humanely from 2015. The SE 300 and SE 500 electrofishers can be used for this purpose, and are CE approved.

How does an electrofisher work?

The fish are attracted to the electric current at the anode. When they get too close, they are stunned temporarily and can be collected. If direct current with a very low ripple voltage is used, the fish are not harmed. After recovering from being stunned they live on, unaffected.

Why choose Stampes Elektro?

The electrofishers are designed to face nature's challenges. Robust components have been used to build a simple, sturdy, reliable and waterproof device.

The SE 300 is used for wading fishing in smaller watercourses, while the SE 500 is used for fishing in larger watercourses. Most of the components of the standard set can be customised.

The electrofishers were designed with the user in mind. An electrofishing assignment may take hours, and so the anode staff is made of the lightest possible materials. The dead-man's switch is movable so that the user can find the most ergonomic position and staff-balance, relative to the water depth and his height.

The electrofishers are also easy to use. The anode and cathode have different plugs, so that they cannot be connected incorrectly. Safety features include a main power switch and a movable dead-man's switch.

The electrofishers are CE approved and meet the EU requirements for humane fish population monitoring. The control box delivers a very low ripple voltage, to minimise harm to fish.

The electrofishers are manufactured in Denmark. Components are kept in stock, and extra equipment can be delivered quickly.

Technical Description

The control box is built to electrical apparatus protection class II, double insulated and mounted in an ABS casing. The control box operates with an anode staff equipped with a dead-man's switch. There cannot be voltage at the anode unless the dead-man's switch is pressed. The control box includes monitoring to ensure that the voltage is cut off if the dead-man's switch is not pressed. The control box has automatic fuses, mounted under a hinged lid so that they can easily be reset.

SE 500 is built to work together with a 3-phase 400 V generator, and SE 300 with a 230 V generator. The control box produces pure DC voltage.

Technical Data

	SE 300	SE 500
Control box		
Input voltage	230 V AC, 50 Hz	3 x 400 V AC, 50 Hz
Input current, maximum	13 A	7.2 A
Output voltage	300 V DC	500 V DC
Maximum ripple voltage	4 V	13 V
Output current, maximum	10 A DC	10 A DC
Control voltage for the dead-man's switch	24 V AC	24 V AC
Size (mm) (length x width x height)	400 x 210 x 310	400 x 210 x 310
Weight	7.4 kg	7.7 kg
Waterproofing class	IP 55	IP 55
Anode Staff		
Ring* diameter	300* mm stainless steel	600* mm stainless steel
Staff	1 300* mm long, 26 mm fibreglass tube**	2 300* mm long, 30 mm fibreglass tube**
Staff weight	0.79 kg	1.8 kg
Cable	52* m	8* m
Cable weight	3.7 kg (0.072 kg/m)	0.9 kg (0.090 kg/m)
Cathode grid		
Grid	320 x 320* mm copper grid	500 x 500* mm copper grid
Cable	8* m	8* m
Recommended Generator	1 500 to 3 000 W	5 000 to 7 000 W

*The anode shape, size, staff length, the cable lengths and the cathode grid size can be customised, according to the customer's requirements. If required by local conditions, the anode can be removed from the staff and a larger or smaller anode can be fitted. An oval or rectangle (these may be better for very low water) can be supplied instead of a ring.

**Two anode staffs, and a control box capable of feeding them, can be supplied, if the customer requires this. If two anode staffs are used, the dead-man's switch must be pressed on both of them to have voltage between the cathode and the anodes. A blind plug is supplied with this configuration, and if the blind plug is plugged into the control box, the electrofisher can be used with only one anode staff.

CE approval

CE marking is mandatory on many products sold in the European Economic Area (EEA). The letters "CE" stand for "Conformité Européenne" ("European Conformity"). By applying the CE mark, the manufacturer declares that the product conforms to all the essential requirements of the applicable EU directives. Essential requirements include safety, health and environmental protection.

EU laws require that electrofishers are CE approved. The SE 300 and SE 500 control boxes are CE approved in accordance with IEC 60335-2-86.

From 2015, fish population analyses in European watercourses will be required. Electrofishers enable biologists to meet this requirement in an effective and humane manner.

Development of the Electrofisher

The electrofisher was developed in co-operation with DTU Aqua (the Danish Technical University's Institute for Aquatic Resources). A report describing the equipment is available.



SE 300 at work in Danish streams