


Instructions for use **SWIMEO OEM**

Change history	
Index	Description of the change
00	Creation

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1. Safety instructions

1.1. Installation safety instructions



Important:

The SWIMEO OEM is intended for professional installers. The information contained in these instructions cannot be used to install the SWIMEO OEM product unless it is integrated into an assembly that guarantees compliance with the standards in force in the country of installation.

The compliance of the final installation is the responsibility of the installer. SIREM cannot take responsibility for any direct or indirect consequences of incorrect installation of the SWIMEO OEM product.

1.1.1. Electrical risk

- The installation and commissioning should only be carried out by specialised and authorised electricians. They should comply with all standards in force for electrical installations.
- The control box should be connected to:
 - o A residual current device (30mA)
 - o A separation device with a 3 mm contact opening on all poles.
- The control box should be mounted in a place that is free from humidity and splashes of water.




1.1.2.Mechanical risks

- Handling the turbine should be done using appropriate means in order to avoid risks related to the carrying of heavy loads.
- The turbine should be attached to the pool in such a way as to prevent any movement during use.
- The installer is responsible for putting protective measures in place. In particular we remind you of:
 - o The risks of injury due to contact with the moving propeller.
 - o The risks of drowning by becoming caught up in the turbine or by suction.

1.2. Safety instructions for use

- This equipment is not designed to be used alone by persons (including children) whose physical, sensory or mental capacities are diminished, or by persons with no experience or knowledge, unless they are supervised by the person responsible for their safety or have previously received instruction in the use of the equipment. The strong current created by the equipment can also cause inexperienced swimmers to be in difficulty. This can lead to a risk of drowning.
- The control elements provided with the kit (remote control) should be kept out of the reach of children.
- It is recommended to always turn the equipment off when it is not in use.

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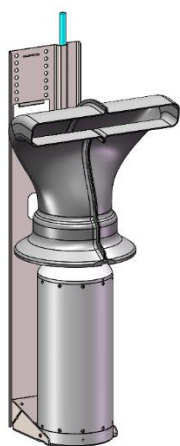
2. Technical description of the product

2.1. Components:

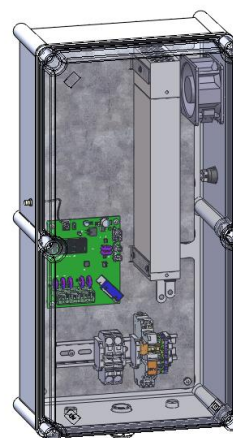
SWIMEO kits include the elements listed below

		Full kits	
		Wall mounted with remote control	Mounted under edge tile with remote control
Description		0943941001	0943941002
Included in the kit	OEM turbine	1	1
	control box	1	1
	Straight mounting plate	1	
	Under edge tile mounting plate		1
	RF remote control kit (1 receiver and 1 transmitter)	1	1
	Additional remote control	1	1
	Packaging	1	1


The main components are the turbine and the control box. Several mounting plates can be used depending on the configuration.



Turbine 09.4394.0100




Control box 05-0812901

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2.2. Technical information

	Value	Tolerance	Unit
05-0812901 control box			
Mechanical			
Weight	7		kg
Dimensions (HxWxD)	565 x 275 x 170		mm
Water resistance	IP20		
Mounting	6 M6 screws		
Water resistance	IP20		
Electrical			
Supply voltage	230	+/- 10%	V AC
Supply frequency	50		Hz
Current consumption	6	+/- 10%	A AC
menu			
Radio technology number	1		
Radiated power	4.25		dBm
Frequency band	2400 – 2483.5		MHz
Antenna	Ref.: 2J7402B Manufacturer: 2J		
Turbine 0943940100			
Mechanical			
Weight	36		kg
Dimensions (HxWxD)	1050x450x350		mm
Max flow speed	3.13		m/s
Output surface	26 724		mm²
Propeller no load speed	0-1960		RPM
Water resistance	IP68		
Electrical			
Voltage	0-30		24 V DC
Current	0-36		A DC
Remote control module			
	See the specific user manual provided with the remote control		
Packaging of full kit			
Number of pallets	1		
Packaging dimensions (LxWxH)	700x700x1250		mm
Weight	63		Kg

*measured at output centre. Integration condition can impact this value.

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3. Installing the turbine in the pool:

3.1. Installation safety instructions


3.1.1. Electrical risk

- The installation and commissioning should only be carried out by specialised and authorised electricians. They should comply with all applicable standards for electrical installations.
- The control box should be connected to:
 - o A residual current device (30mA)
 - o An all-pole isolation device with a 3 mm contact gap width.
- The control box should be mounted in a place that is free from humidity and splashes of water.

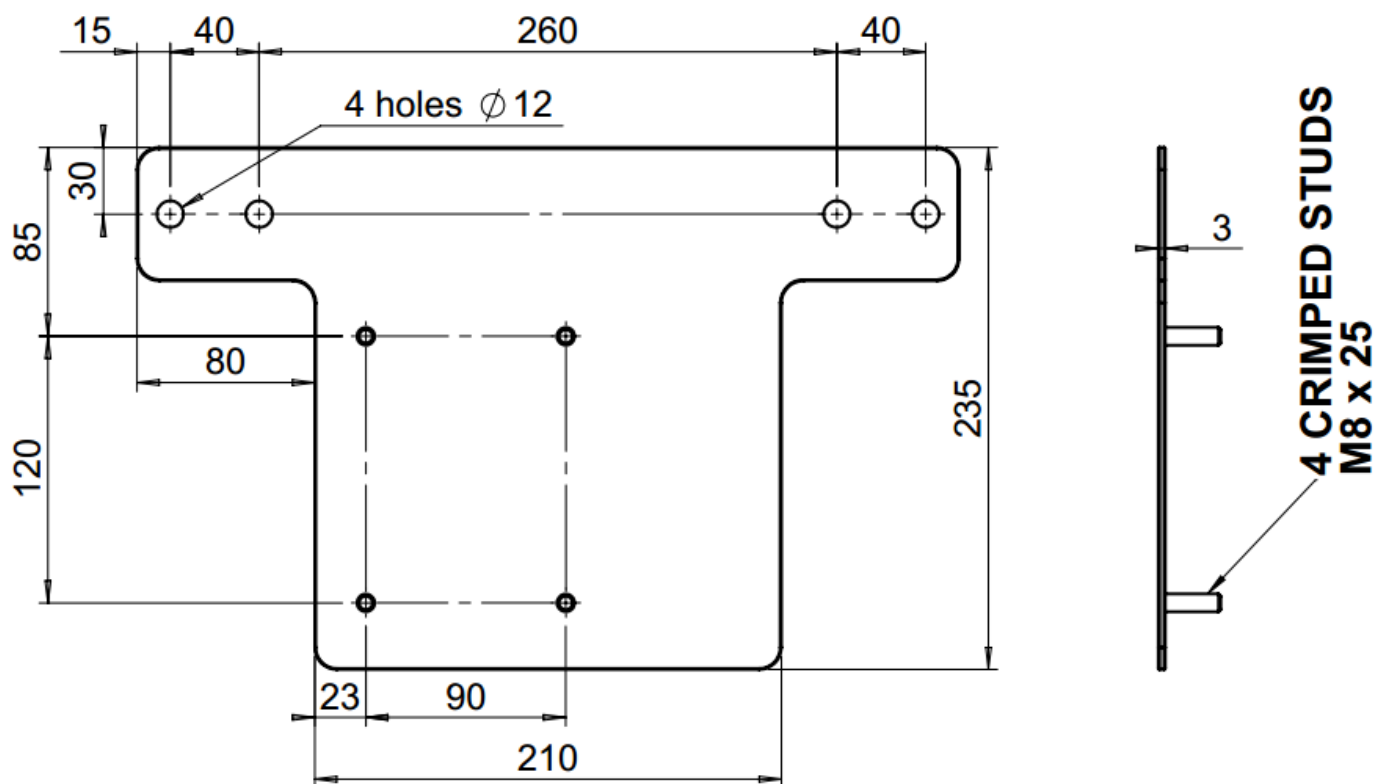
3.1.2. Mechanical risks

- Handling the turbine should be done using appropriate means in order to avoid risks related to the carrying of heavy loads.
- The turbine should be attached to the pool in such a way as to prevent any movement during use.
- The installer is responsible for putting protective measures in place. In particular we remind you of:
 - o The risks of injury due to contact with the moving propeller.
 - o The risks of drowning by becoming caught up in the turbine or by suction.

The turbine should always be carried by the metal frame.

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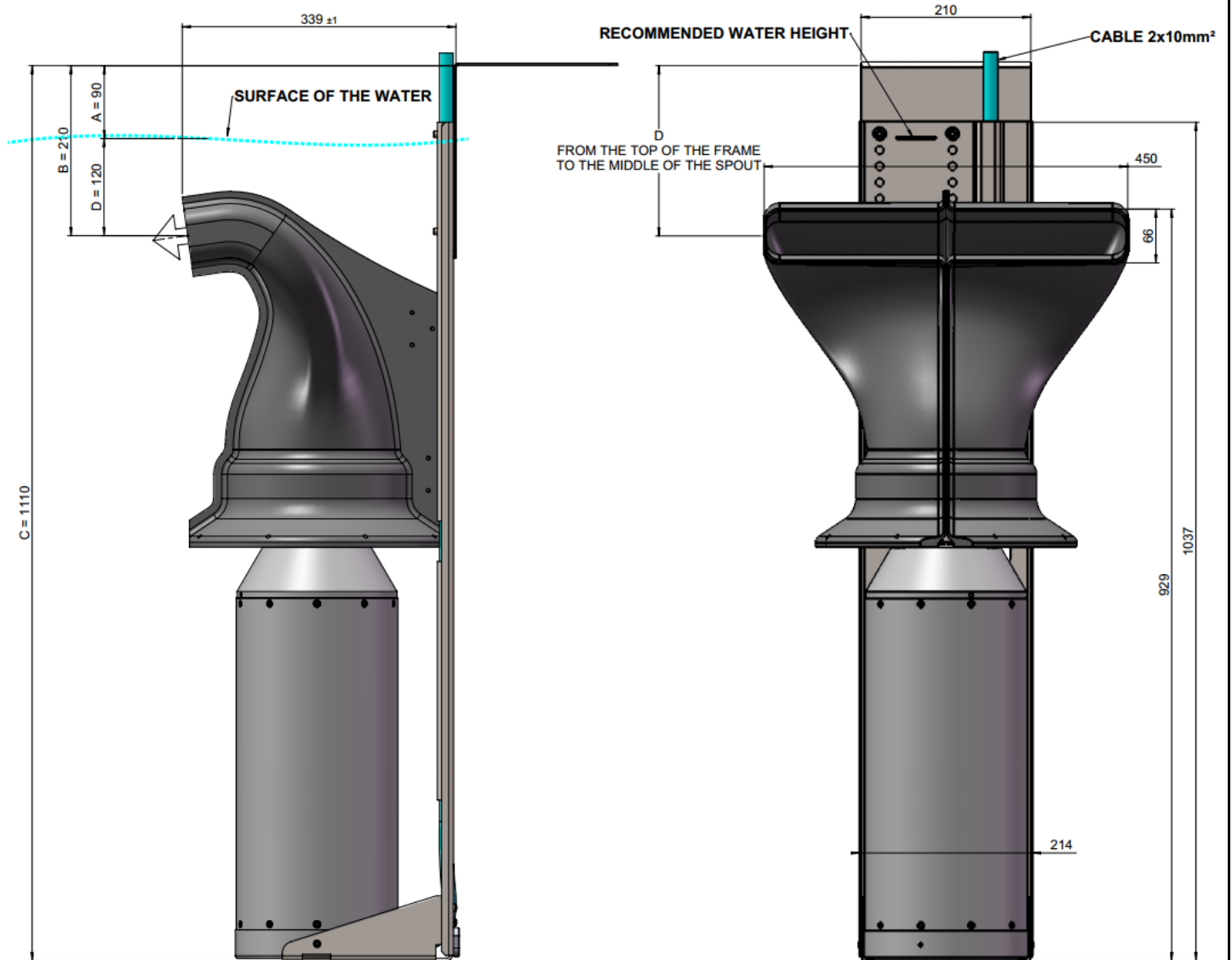
The SWIMEO is then mounted on at least 4 stud bolts, making an adjustment in relation to the water level.



DIMENSIONS OF THE SUPPORT PLATE

3.4. Adjusting the height of the turbine:

The recommended adjustment for the turbine is to have the centre of the water outlet at a depth of 120mm.



distance from top of water to the top of wall (A)	depth of setting advised (D)	setting hight (B)	minimum wall hight (C)
30	120	150	1050
50		170	1070
70		190	1090
90		210	1110
110		230	1130
130		250	1150
150		270	1170
170		290	1190
190		310	1210
210		330	1230



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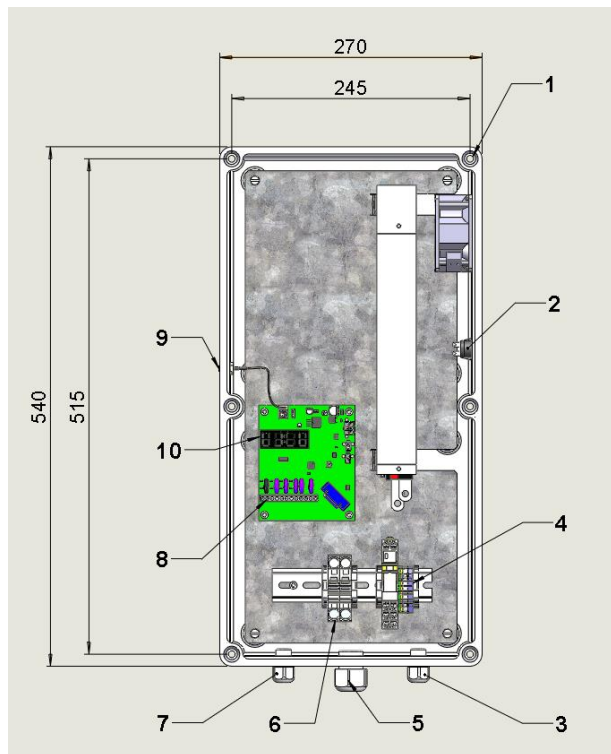
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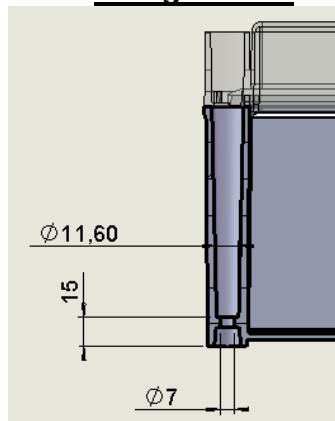
4. Installation and connection of the control box



- (1) Fixing points Ø7 (x6)
- (2) Switch
- (3) Cable gland M25 turbine cable
- (4) Supply terminal: max. section 4 mm²
- (5) Cable gland M16 Power supply cable
- (6) Turbine terminal block: max. section 25 mm²
- (7) Cable gland M25 control cable
- (8) Pluggable control terminal block: max. section 2.5mm²
- (9) SMA Bluetooth antenna connector
- (10) Touch screen

Wiring must be done to current standards in the country of installation

4.1. Fixing the box



The box is intended for installation in a location sheltered from the weather (not exposed to sunlight or rain). It should be secured to a vertical wall at a height of at least 1.5 m from the ground with the cables connected at the bottom. Fixing is completed under the fixing points on the cover (1) once the cover has been removed.

The screws and rawlplugs required to fix the control box in place are not included with the box.


4.2. Cable entry and connection

The cable glands are supplied mounted to the box.

All cables connected to the box must pass through the glands:

Cable	Cable gland	Cable diameter	Connector	Section of copper tubing
Network power	(3) ISO M16	5 – 10 mm	(4) TOPJOB® terminal block	1.5 - 4 mm ²
Turbine	(5) ISO M25	10 – 17 mm	(6) TOPJOB® terminal	4 - 25 mm ²
Controls	(7) ISO M16	5 – 10 mm	(8) Pluggable terminal block to be screwed down for electronic card	0.75 – 2.5 mm ²

Important: there is no strain relief in this control box. The cables should be fixed or fed through cable trays.

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4.3. Connection to the mains



The installation and commissioning should only be carried out by specialised and authorised electricians. They should comply with all standards in force for electrical installations.

Connection to the mains is made at the terminal block (4) in compliance with colour coding.
The box will be connected to a 30mA residual current device.

4.4. Connection to earth

Protection against over-voltages will only be fully effective if the connection to earth has a resistance of less than 20 ohms. If the building's main earthing is a long way from the installation site, this may not be the case. Under these circumstances, it may be necessary to separate the main building earthing from this installation. A residual current device **MUST** then be installed specifically for the pool, in accordance with standard NF C15-100 or CEI 60364.

4.5. Connecting the turbine

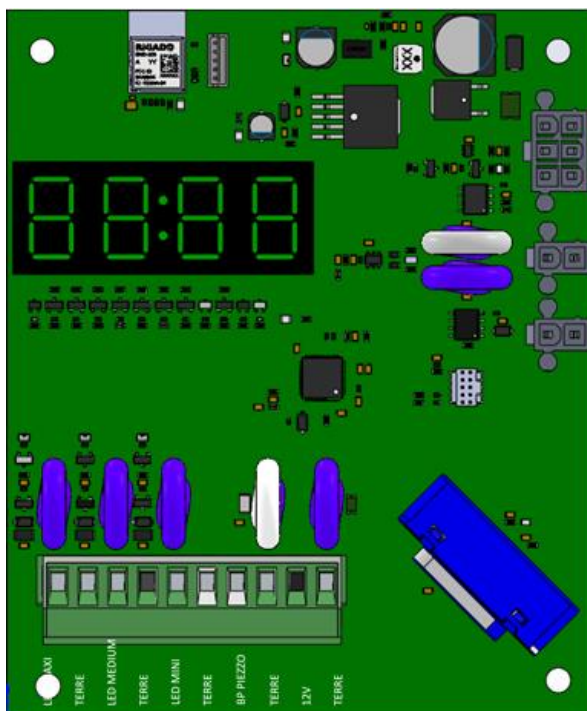
The turbine is supplied with approximately 2m of cable. The customer can add an extra length of cable to adapt to constraints. In this case the connection must be made in a waterproof connection unit filled with gel or resin.

The connection is made to the terminal block (6) as shown in the above diagram in compliance with colour coding.

The sections of copper tubing to be used for the motor cable are:


- 10mm² for an additional length < 5m
- 16mm² for an additional length > 5m and < 16m
- 20mm² for an additional length > 16m and < 20m
- 25mm² for an additional length > 20m and < 35m
- 35mm² for an additional length > 35m

4.6. Connection of the control terminal block



On the electronic card, a terminal block is available for connecting an external control. The terminal block includes:

- 1 x 12V 100mA power output
- 3 x 20mA 'LED' outputs:
- 1 'PIEZO push button' input to which a dry contact can be connected in order to vary the speed by pressing a number of times (off, speed 1, speed 2, speed 3, speed 4, off)

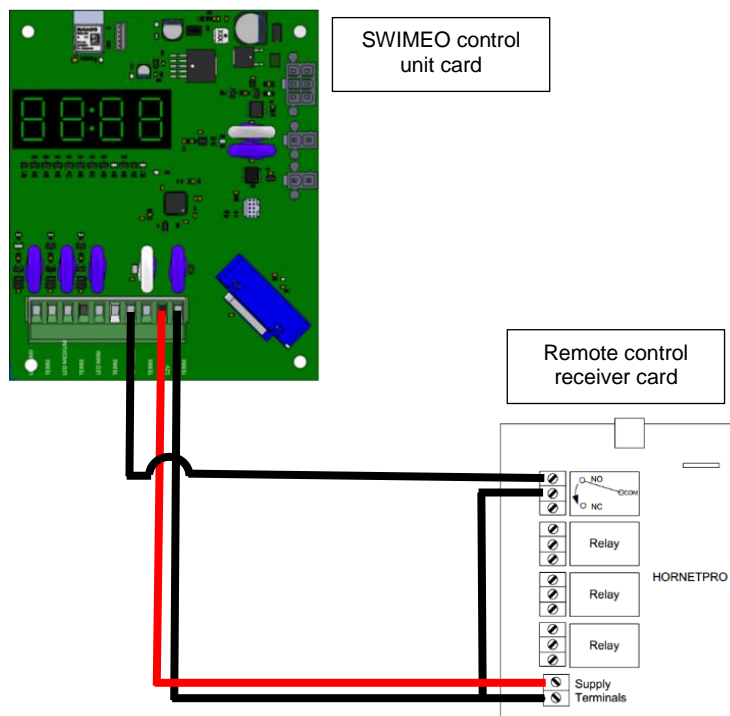
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4.7. Connection of the terminal block of the remote control box

A remote control kit 4900150006 is included with the SWIMEO kit. The installation and programming should be carried out using the specific user manual.

In order to have the best possible signal, the receiver box should be placed near the pool (maximum distance of 50m in an open area).

Once installed, the connection is made on the control terminal block (8) as per the diagram below:



4.8. Connecting the Bluetooth antenna

A Bluetooth antenna is supplied with the SWIMEO system. It should be placed near the pool and connected to the control box via the connector (9).

5. Use


After installation and wiring of the turbine and the control box. The switch is used to power on (6). The turbine is then ready for use.

5.1. Controlling the turbine

Pressing the remote control button several times allows you to vary the speed according to the diagram below:

- ➔ 1st press switches from standby status to speed V1
- ➔ 2nd press switches from speed V1 to speed V2
- ➔ 3rd press switches from speed V2 to speed V3
- ➔ 4th press switches from speed V3 to speed V4
- ➔ 5th press returns it to standby mode

After 1 hr. of continuous operation, the equipment automatically switches to standby mode.

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When the turbine is in operation, the LED outputs of the electronic card are enabled as follows:

Status	Max. LED	Med. LED	Min. LED
Off	0	0	0
V1	0	0	1
V2	0	1	0
V3	1	0	0
V4	1	1	1

The control box display shows:

- In standby mode, the number of operating hours since start-up.
- The operating speed when in operation.

In the case of a fault, the following codes can appear:

Error code	Description of the fault/probable causes	Corrective action
E1	Control box overheating fault	 <p>Check that the fan is working and is not clogged. Cut off the power supply and wait for the box to cool down before restarting a cycle.</p>
E2	Low amperage fault: - The motor cable is not connected. - The propeller is broken - The power supply is faulty.	 <p>Switch off the power supply. Check the cable between the control box and the turbine Check the integrity of the propeller</p>
E3	High amperage fault: - the motor is stuck or held back - there is a short-circuit in the motor cable	 <p>Switch off the power supply. Clean the propeller Check the integrity of the power supply cable and the connections</p>

To clear the fault, cut off the control box power supply for 10s.

The properties of the pool in which the turbine is places are as follows:

- Chemical:
 - Bleach concentration: < 5 mg/l (pH<=7.4) NaOCl
 - Chlorine concentration: < 1.5 mg/l (pH<=7.4) Cl₂
 - Bromine concentration: < 5 mg/l (pH<=7.4) Br₂
 - Hydrogen peroxide concentration: < 10 mg/l H₂O₂
- Water temperature in operation: 0 – 35°C
- Water temperatures in storage: 0 – 40°C (no freezing)
- Air temperature in operation: -20 – 40°C
- Air temperatures in storage: -20 – 50°C