

EVAstream FIT, PRO and MAX

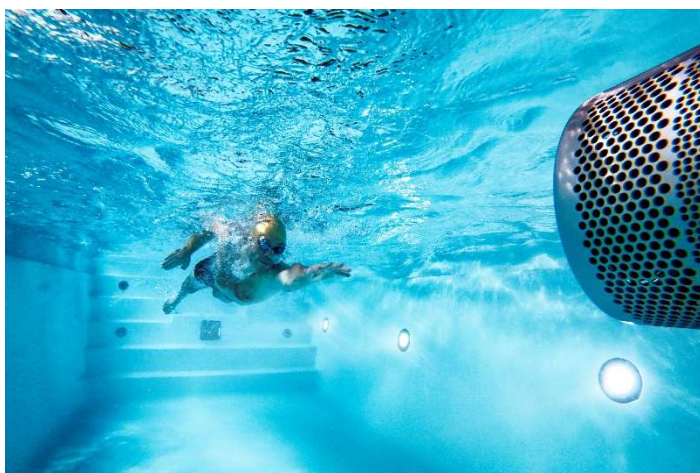
PART I Safety instructions for Mounting and Installation



Follow the directions for assembly, electrical installation, and use carefully. Failure to comply or inadequate compliance with these important instructions can result in serious personal injury or property damage. We do not accept any claim under warranty and/or liability for material and/or intangible damage as a result of failure to comply with these regulations regarding installation, mounting, and use.

The general terms and conditions of EVA Tech B.V. apply to all our offers and agreements. EVA Tech B.V. expressly rejects the applicability of the general (purchasing) conditions of counterparties.

The warranty provisions of the EVAstream and the general terms and conditions of EVA Tech B.V. can be found at www.evastream.nl



EVAstream Surface mounting model



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Electrical specifications

AC/DC POWER SUPPLY		EVAstream FIT	EVAstream PRO	EVAstream MAX
Input	Voltage range	180-264Vac 254-370Vdc	180-264Vac 254-370Vdc	180-264Vac 254-370Vdc
	Frequency range	47-63Hz	47-63Hz	47-63Hz
	AC current (230VAC)	5.5A	9A	11A
	Nominal power	1200VA	2000VA	2400VA
	Power factor (type)	>0.9	>0.9	>0.9
Output	DC bus voltage (stabilized)	26Vdc	28Vdc	28Vdc
	DC bus current	46A	71A	86A
Protections	Short circuit, overload, over voltage, over temperature			
Safety standards	SELV, UL62368-1, CSA C22.2 No. 62368-1, TUV EN62368-1 + A11, EAC TP TC 004, BSMI CNS14336-1 approved, EN55032 (CISPR32) Class A/B, EN61000-3-2/3, EN61000-4-2/3/4/5/6/8/11, EN55024 , EN61204-3, EN61000-6-2, BSMI CNS13438.			
MOTOR CONTROL UNIT		EVAstream FIT	EVAstream PRO	EVAstream MAX
Input	Control input	DMX512	DMX512	DMX512
Output	Motor PMSM 3xDC	RPM range 10-100%	RPM range 10-100%	RPM range 10-100%
Housing	Dimensions	660 x 185 x 115 mm (cable gland on bottom)	660 x 185 x 115 mm (cable gland on bottom)	660 x 220 x 115 mm (cable gland on bottom)
	IP rating	IP20	IP20	IP20
Working temp.	Max. 32°C, mount in a dry and condensation-free area			
Safety measures	EVA Torque control, Voltage/current control, Mosfet temperature control			

Norm compliance

Low-voltage LVD Directive: 2014/35/EU	
■ EN 60364-4-41	
■ EN 60364-7-702	
■ EN 62368-1	
EMC Directive: 2014/30/EU	
<i>EMI Electromagnetic Emission</i>	
■ EN 55032 (CISPR32) Class A, B	
<i>EMC Electromagnetic Compatibility</i>	
■ EN 61000-3-2	■ EN 61000-3-3
<i>EMC Immunity & Safety</i>	
■ EN 61000-4-2	■ EN 61000-4-6
■ EN 61000-4-3	■ EN 61000-4-8
■ EN 61000-4-4	■ EN 61000-4-11
■ EN 61000-4-5	■ EN 61204-3
■ EN 55024	■ EN 61000-6-2
<i>Specific standards</i>	
■ EN 13451-1	■ EN 13451-3
■ EN 16582-1	■ EN 16582-2
■ EN 16582-3	■ EN 16713-2
■ EN 15288-1	■ EN 60204-1



Safety regulations for installation and mounting EVAstream



WARNING! Switch off all relevant live cables before starting installation.



RISK OF ELECTRIC SHOCK OR INJURY. The EVAstream and its control accessories must be installed by a certified electrician in accordance with applicable local rules and regulations. Incorrect installation can cause electrical hazards.

- Follow the instructions in this manual carefully. For questions or ambiguities, please contact your distributor/reseller or visit www.evastream.nl.
- EVA Tech B.V. guarantees that this product is free from defects in material and/or workmanship, under normal conditions, use and maintenance, for two (2) years from the original invoice date. Visit www.evastream.nl for product data sheets and our full warranty terms.
- Follow the NEN1010 guidelines. Follow the specific installation requirements of IEC 60364-7-702: 2010 (Electric low-voltage installations - Part 7-702: Requirements for special installations, spaces, and areas – Swimming pools and fountains). Install the controller in or outside of zone 2 (NOT in zones 0 or 1) according to IEC 60364-7-702: 2010. The power supply must be equipped with an earth leakage circuit breaker (ELCB) with a nominal differential current $\leq 30\text{mA}$.
- The EVAstream comes equipped with a connection cable with plug. If the EVAstream is permanently connected to 230V mains, the installation must additionally be equipped with a main switch/isolation switch in the room where the Motor Control Unit is installed. This switch is necessary to de-energise the installation during maintenance and work. In addition, an on/off switch must be mounted in the room where the swimming pool with EVAstream is located. Users should use this on/off switch to turn on the machine right before use and to turn it off immediately after use.
- The EVAstream was developed as a counter-current swimming machine for use in a swimming pool. Use for any other purpose is not permitted. Requests for exceptions to this should be submitted to the manufacturer for technical analysis. Only after written approval by EVA Tech B.V. may the EVAstream be applied in any other way than as prescribed in this document.
- Water suction takes place through the grids around the machine. Always make sure that the suction parts are completely free of obstacles. These parts of the machine must not be closed or blocked in any way. This not only ensures an adequate supply of water, but also ensures that the suction power always remains within the required levels (EN 13451-1/3).
- Make sure that the EVAstream cable (or any other cabling!) cannot be sucked in by the machine.

Use of accessories and mounting materials

- Only use the accessories/bolts/screws/nuts that are supplied by EVAstream.
- Only use the original mounting accessories. Warranty expires irrevocably if other materials are used.
- Make sure that the accessories and mounting hardware used meet the requirements and guidelines that apply to your specific application.
- Extend the cable after 5 metres with $3 \times 25\text{mm}^2$ cable to a maximum total cable length of 25m. Always lay the cables in a jacket pipe up to the Motor Control Unit in the technical room to allow for replacement.

Environmental conditions for EVAstream use

Requirements for water composition and environment

Environmental conditions use EVAstream

- Ambient temperature of power supply box: 0 °C to 32 °C (mounting in a dry condensation-free room).
- Advised Mounting depth: Centre of the Turbine at 250mm
- Water temperature: +5° C to +35° C.

Water values

The user of the EVAstream is responsible for providing the right conditions for an optimal product life cycle. To fulfil the warranty conditions, the EVAstream should only be used in basins with a water composition within the following limits:

- pH value: 6.8 – 7.8
- Maximum chlorine levels for water:
 - Indoor swimming pool – Free available chlorine (FAC): $0.5 \leq \text{VBC} \leq 1.5 \text{ mg / l}$
 - Open-air swimming pool $\geq 20 \text{ m}^2$ – Free available chlorine (FAC): $0.5 \leq \text{VBC} \leq 3.0 \text{ mg/l}$
 - Open-air swimming pool $< 20 \text{ m}^2$ – Free available chlorine (FAC): $0.5 \leq \text{VBC} \leq 5.0 \text{ mg/L}$
 - All basins – Bound available chlorine: $< 0.6 \text{ mg/l}$
- The basin and the available accessories must be free of electrolysis.
- Installation housing must be properly earthed to prevent electrolysis.
- Cyanuric acid: $\leq 100 \text{ mg/l}$
- Metals: $\approx 0 \text{ mg/l}$
- Carbonate hardness: $\geq 2^\circ\text{dH}$ ($^\circ\text{dH} = \text{mmol/l} \times 2.8$); ($^\circ\text{eH} = \text{mmol/l} \times 3.5$); ($^\circ\text{fH} = \text{mmol/l} \times 5.0$)
- Ozone: 0 mg/l
- Σ chlorite + chlorate: $\leq 30 \text{ mg/l}$
- Redox potential: $\geq 700 \text{ mV}$

Unintended uses

- Not for use in potentially explosive areas.
- Not for use in an aggressive environment (gases, acids, vapours, substances, oils).
- Not for use in dirty water.
- The turbine should not be used above water.
- Depending on the type of concrete, the installation shaft must be protected. When using concrete with high chloride and sulphate constituents (e.g. Thermotec), the back of the installation shaft must be protected against these harmful substances with a PE film (building protection film).