



D-EWT Series

Electric Pool Water Heater Installation, Operation & Maintenance Manual

Series codes: 203.11.295 – 203.11.339



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OXYGON — Karamaouna St., N. Rysio, 57001 Thessaloniki, Greece

Tel: +30 2312 208 240 | info@oxygen.gr | www.oxygen.gr

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1. Safety Warnings

Read the following instructions carefully before installing, operating or servicing the unit. They contain critical information for the safety of the user and the integrity of the installation.

INSTALLATION BY QUALIFIED PERSONNEL ONLY

Installation and electrical connection of this unit may be carried out **only by a licensed electrician**, in accordance with the applicable national regulations and with standards VDE 0105 and DIN VDE 0100. Incorrect installation may cause electric shock, fire or destruction of the unit, and voids the warranty.

ELECTRIC SHOCK HAZARD

Before any intervention, **fully isolate the power supply**. The unit must be supplied through a residual-current device (FI/RCD) rated **0.03 A** and a circuit breaker, must be earthed, and must be bonded to the equipotential bonding of all metal parts of the installation. Do not touch the unit with wet hands or feet.

FIRE HAZARD — HIGH SURFACE TEMPERATURES

In the event of a fault, the surface of the heater may reach **100 °C**. Mount it on a heat-resistant base extending **at least 10 cm** beyond every side of the unit. **Do not cover** the unit and do not surround it with thermal insulation. During assembly, the safety-thermostat sensor must be inserted **first and fully** into its pocket.

NEVER RUN DRY — RISK OF DESTROYING THE HEATING ELEMENTS

The heater must **never** operate without water flow. Its operation is always controlled **by the filter pump** (interlock), never by the flow switch or pressure switch alone. During **backwash** the heater must be switched off.

2. The D-EWT Series

The **D-EWT** series are electric heat exchangers for heating swimming-pool water. They are installed in the filtration circuit, **after the filter**, and heat the water by means of electric elements immersed directly in the water stream. Model selection is driven by water chemistry: the more aggressive the water, the more noble the element and body material must be.

Model	Body	Element	Suitable for	Output
D-EWT Evo Line	AISI 316 stainless steel	Incoloy 825	Chlorinated pools, conventional chemistry	1.5 - 18 kW
D-EWT Ti Line	Titanium	Titanium	Sea water, salt electrolysis, high chlorine	3 - 18 kW
D-EWT Economy Line	PVC	Incoloy 825	Economical solution, conventional chemistry	1.5 - 18 kW
D-EWT Neo Incoloy	Composite	Incoloy 825	Compact solution, conventional chemistry	1.5 - 18 kW
D-EWT Neo Titanium	Composite	Titanium	Compact solution, salt water	3 - 18 kW



D-EWT Evo Line



D-EWT Ti Line



D-EWT Economy Line



D-EWT Neo Line

Selection note: in pools with **salt electrolysis** or a chloride content above 500 mg/l a titanium model (Ti Line or Neo Titanium) is **mandatory**. Using a stainless-steel or Incoloy model in such water leads to rapid corrosion and is **not covered by the warranty**.

3. Technical Data & Product Codes

Maximum operating pressure	Evo · Ti · Economy: 3 bar Neo: 2.5 bar
Minimum water flow	Evo · Ti: 2.800 l/h Neo: 3.000 l/h Economy: 4.000 l/h
Flow monitoring device	Evo · Ti · Neo: flow switch Economy: pressure switch
Control thermostat	0 – 40 °C
Safety thermostat	up to 50 °C, manual reset
Water connections	Ø 50 mm gluing socket
Max. control-circuit load	1 A
Protection rating	IP X5
Specific water resistance	≥ 550 kΩ·cm at 15 °C

D-EWT Evo Line — AISI 316

Output	Voltage / Phases	Current	Oxygen code
1.5 kW	240V / 1PH	6.6 A	203.11.295
1.5 kW	400V / 3PH	2.2 A	203.11.296
3.0 kW	240V / 1PH	12.9 A	203.11.297
3.0 kW	400V / 3PH	4.3 A	203.11.298
6.0 kW	240V / 1PH	26.1 A	203.11.299
6.0 kW	400V / 3PH	8.7 A	203.11.300
9.0 kW	400V / 3PH	13.0 A	203.11.301
12.0 kW	400V / 3PH	17.3 A	203.11.302
15.0 kW	400V / 3PH	21.7 A	203.11.303
18.0 kW	400V / 3PH	26.0 A	203.11.304

D-EWT Ti Line — Titanium

Output	Voltage / Phases	Current	Oxygen code
3.0 kW	240V / 1PH	12.9 A	203.11.305
3.0 kW	400V / 3PH	4.3 A	203.11.306
6.0 kW	240V / 1PH	26.1 A	203.11.307
6.0 kW	400V / 3PH	8.7 A	203.11.308
9.0 kW	400V / 3PH	13.0 A	203.11.309
12.0 kW	400V / 3PH	17.3 A	203.11.310
18.0 kW	400V / 3PH	26.0 A	203.11.311

D-EWT Economy Line

Output	Voltage / Phases	Current	Oxygen code
1.5 kW	240V / 1PH	6.6 A	203.11.312
1.5 kW	400V / 3PH	2.2 A	203.11.313
3.0 kW	240V / 1PH	12.9 A	203.11.314
3.0 kW	400V / 3PH	4.3 A	203.11.315
6.0 kW	240V / 1PH	26.1 A	203.11.316
6.0 kW	400V / 3PH	8.7 A	203.11.317
9.0 kW	400V / 3PH	13.0 A	203.11.318
12.0 kW	400V / 3PH	17.3 A	203.11.319
15.0 kW	400V / 3PH	21.7 A	203.11.320
18.0 kW	400V / 3PH	26.0 A	203.11.321

D-EWT Neo Line — Incoloy

Output	Voltage / Phases	Current	Oxygen code
1.5 kW	240V / 1PH	6.6 A	203.11.322
1.5 kW	400V / 3PH	2.2 A	203.11.323
3.0 kW	240V / 1PH	12.9 A	203.11.325
3.0 kW	400V / 3PH	4.3 A	203.11.326
6.0 kW	240V / 1PH	26.1 A	203.11.327
6.0 kW	400V / 3PH	8.7 A	203.11.328
9.0 kW	400V / 3PH	13.0 A	203.11.329
12.0 kW	400V / 3PH	17.3 A	203.11.330
15.0 kW	400V / 3PH	21.7 A	203.11.331
18.0 kW	400V / 3PH	26.0 A	203.11.332

D-EWT Neo Line — Titanium

Output	Voltage / Phases	Current	Oxygen code
3.0 kW	240V / 1PH	12.9 A	203.11.333
3.0 kW	400V / 3PH	4.3 A	203.11.334
6.0 kW	240V / 1PH	26.1 A	203.11.335
6.0 kW	400V / 3PH	8.7 A	203.11.336
9.0 kW	400V / 3PH	13.0 A	203.11.337
12.0 kW	400V / 3PH	17.3 A	203.11.338
18.0 kW	400V / 3PH	26.0 A	203.11.339

4. Dimensions

Dimensions are given in **millimetres (mm)** and are taken from the manufacturer's technical data sheets.

Evo Line & Economy Line

Output (kW)	A	B	C	D	E
1.5	293	345	475	110	255
3.0	293	345	475	110	255
6.0	363	415	545	110	255
9.0	363	415	545	110	260
12.0	453	505	635	110	260
15.0	553	605	735	110	270
18.0	653	705	835	110	270

Ti Line

Output (kW)	A	B	C	D	E
3.0	293	345	455	110	255
6.0	363	415	525	110	255
9.0	363	415	525	110	260
12.0	453	505	615	110	260
18.0	653	705	815	110	270

Neo Line (Incoloy & Titanium)

Output (kW)	A	C	D
1.5	287	480	260
3.0	287	480	260
6.0	357	550	260
9.0	357	550	264
12.0	547	745	264
15.0	547	745	270
18.0	647	845	270

Important: allow at least **0.5 m** of clear space in front of the cap so that the element bundle can be withdrawn for servicing.

5. Water Quality & Corrosion Prevention

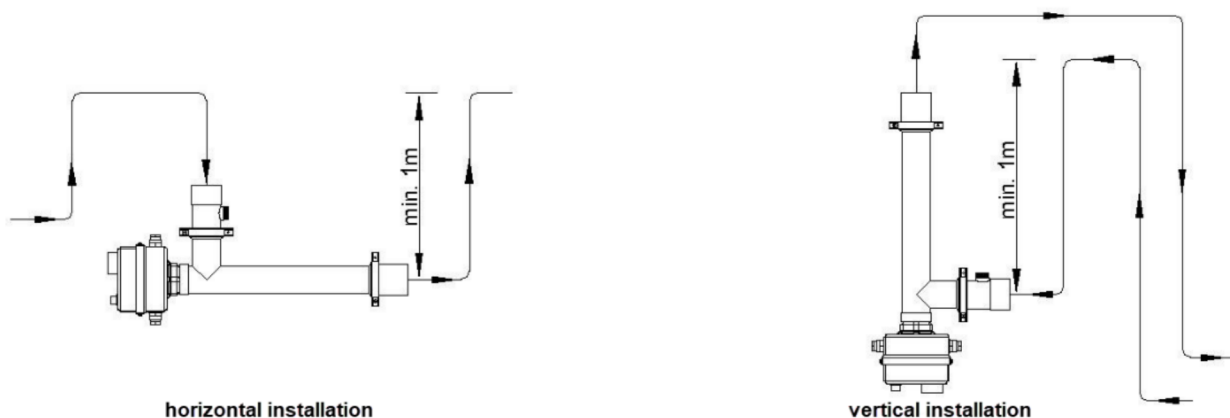
The service life of the heater depends **directly** on water chemistry. The limits below are binding.

Parameter	Stainless / Incoloy models	Titanium models
Chloride (Cl ⁻)	up to 500 mg/l	up to 3,000 mg/l
Free chlorine	up to 1 mg/l	no limit
pH	6.8 – 7.8	6.8 – 7.8
Salt content	—	up to 3 %
Specific water resistance at 15 °C	≥ 550 kΩ·cm	≥ 550 kΩ·cm

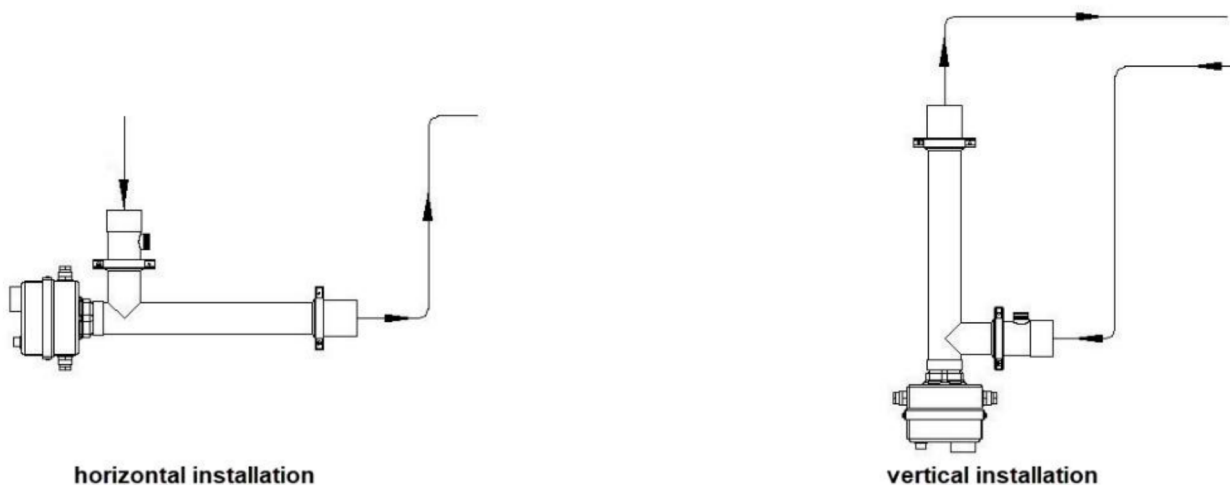
- Keep chlorine and pH within limits by regular testing — over-chlorination destroys the elements.
- Never add chemicals directly into the filtration circuit upstream of the heater.
- Chemical dosing must take place **downstream** of the heater, through a non-return injection valve.
- After shock chlorination, run the filter pump with the heater **switched off** until free chlorine falls below 1 mg/l.
- In correctly balanced water the specific resistance remains between 1.5 MΩ·cm and 550 kΩ·cm.

6. Installation

- Install the heater in the filtration circuit, **after the filter** and after any other treatment equipment.
- Water flow must follow the arrow marked on the body of the unit.
- Mount the unit on a **heat-resistant** surface with a margin of ≥ 10 cm on every side.
- Fit **isolating valves** before and after the heater so it can be removed without emptying the pool.
- The plant room must have a **floor drain** and adequate ventilation.
- Do not install the unit where it may be flooded.



Installation above water level — horizontal (left) and vertical (right) layout

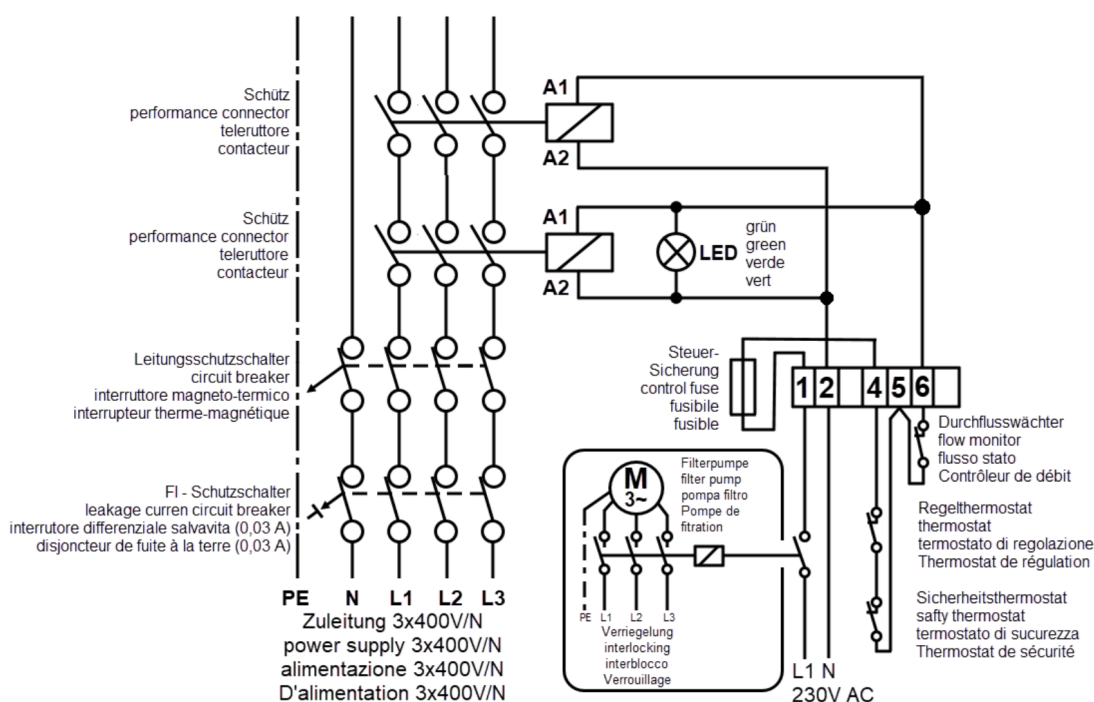


Installation below water level — horizontal (left) and vertical (right) layout

Note: when the unit is installed below water level, isolating valves are **mandatory**: without them, any work on the heater requires emptying the pool.

7. Electrical Connection

- Install an **FI (RCD) 0.03 A** residual-current device and a correctly rated circuit breaker upstream of the unit.
- The heater must be **earthed**.
- All metal parts of the installation must be connected to the **equipotential bonding**.
- Connection must be made with **fixed wiring** — not with a plug and socket.
- Use **H07 RN-F** cable or equivalent, with a cross-section to VDE 0100 according to the current.
- The control circuit (thermostats, flow switch) may be loaded with **max. 1 A**.
- The heater must be **interlocked with the filter pump**: with the pump off, the elements receive no supply.



Typical control circuit

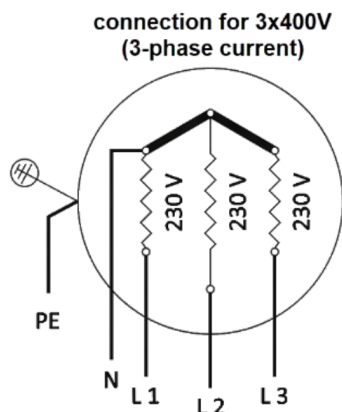


Diagram 1

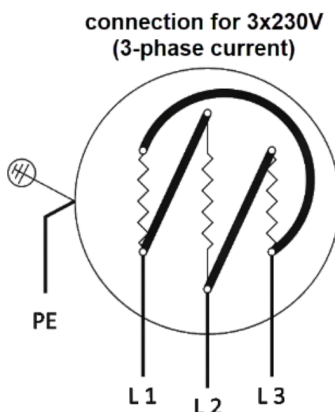


Diagram 2

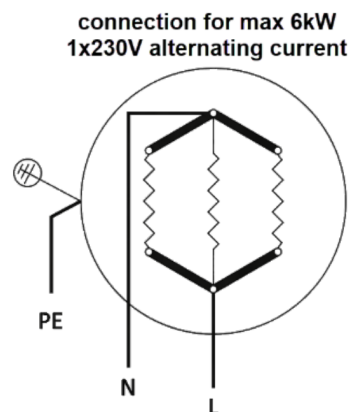
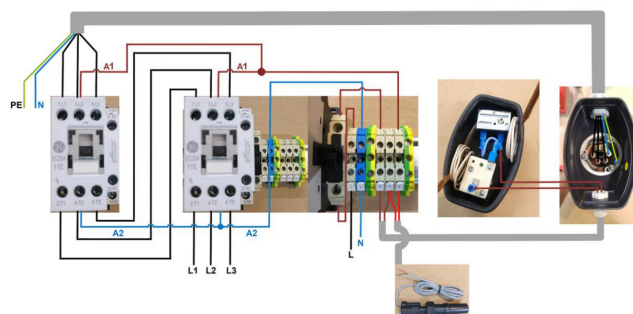
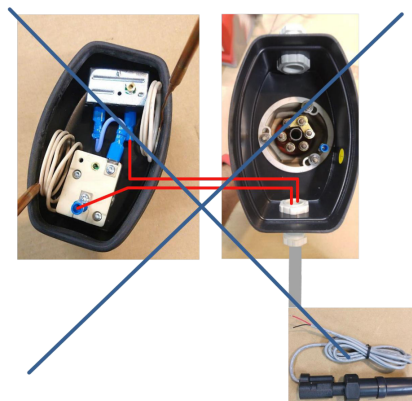


Diagram 3

Heating-element wiring — Diagram 1: 3x400 V three-phase · Diagram 2: 3x230 V three-phase · Diagram 3: 1x230 V single-phase, up to 6 kW



Correct connection



Incorrect connection

Caution: the element terminals must be tightened with **two spanners** — one holding the lower nut while the other tightens the upper one. Tightening with a single spanner distorts the terminal and causes the connection to overheat.

8. Operation & Safety Devices

Device	Setting	Function
Control thermostat	0 – 40 °C	Sets the water temperature; switches off when the set value is reached.
Safety thermostat	up to 50 °C	Permanently cuts the supply on overheating; requires manual reset.
Flow switch / pressure switch	model-dependent	Allows operation only when sufficient water flow is present.

- Start the filter pump and make sure the circuit is completely vented.
- Set the control thermostat to the desired temperature (26 – 28 °C recommended).
- The heater starts only when flow is sufficient and the filter pump is running.
- During **backwash** the heater must be switched off.
- If the safety thermostat trips, **find the cause** (no flow, clogged filter, closed valve) before resetting.

9. Frost Protection & Winterising

- Before winter, **completely drain** the heater and the filtration circuit.
- Open the drain plug and leave it open for as long as the installation is out of service.
- Isolate the electrical supply.
- Water freezing inside the body **destroys the heater** and such damage is not covered by the warranty.

10. Maintenance

- Check water chemistry regularly (pH, free chlorine, chloride).
- Clean the filter and the pump strainer so that the minimum flow rate is maintained.
- Check the tightness of the electrical terminals annually (with the unit de-energised).
- Test the residual-current device (FI/RCD) annually using its test button.
- Inspect the elements for scale deposits; clean them mechanically, without acid solutions on Incoloy models.
- Replace the sealing O-ring every time the body is opened.

11. Spare Parts

Common spare parts (Evo · Ti · Economy)

Pos.	Code	Description
1	11 09 68	Safety thermostat 50 °C
2	11 09 25	Cap, top part (ABS)
3	11 09 78	Temperature regulator
4	11 09 47	Screw M4×4
5	11 09 26	Thermostat 0-40 °C
6	11 04 04	Nut M4
7	11 09 30	Mounting ring
8	11 09 39	Cable gland PG 11
9	11 09 43	Self-tapping screw 3.9 × 6.5
10	11 09 40	Lock nut PG 11
16	11 29 03	Clamp PP 30% GF
18	11 24 05	O-ring 47.5 × 5.34
20	11 29 02	Gluing socket Ø 50 mm

Description	Code
Flow switch 2,800 l/h (Evo · Ti)	11 09 52
Flow switch 3,000 l/h (Neo)	11 35 20
Pressure switch (Economy)	11 10 01

Bodies & heating elements by model

Model	Body	Code	Element	Code
D-EWT Evo Line	Body AISI 316 stainless steel	12 30 06 - 12	Incoloy 825	11 09 12 - 18
D-EWT Ti Line	Titanium body	12 25 01 - 05	Titanium	10 02 28 - 32
D-EWT Economy	PVC body	12 30 01 - 04	Incoloy 825	11 09 12 - 18
D-EWT Neo Incoloy	Composite body	—	Incoloy 825	11 09 12 - 18
D-EWT Neo Titanium	Composite body	—	Titanium	10 02 28 - 32

Ordering spare parts: always quote the Oxygen product code, the output in kW and the operating voltage, together with the position and code of the spare part.

12. Warranty & Contact

Declaration of conformity: the products of the D-EWT series comply with Directives **2014/30/EU** (Electromagnetic Compatibility), **2014/35/EU** (Low Voltage) and **2011/65/EU** (RoHS). The EU declaration of conformity is available from OXYGON on request.

- The warranty covers defects in material and workmanship under normal use.
- The warranty **does not cover:** frost damage, dry running, corrosion caused by water outside the limits of the "Water Quality" chapter, incorrect electrical connection, or intervention by unauthorised personnel.
- Every warranty claim requires the purchase document and the product code.
- Consumables (O-rings, seals) are excluded.

Contact Information

Company	OXYGON — Karavasilis Stergios & Sia EE
Head office	Karamaouna St., N. Rysio, 57001 Thessaloniki, Greece
Telephone	+30 2312 208 240
Mobile	+30 6945 157 589
Email	info@oxygen.gr
Website	www.oxygen.gr
Romania branch	Str. Constelatiei 1 Bis, Voluntari, Bucharest
Romania telephone	+40 753 380 848

ISO Certifications

ISO 9001:2015 Quality Management <i>EUROCERT</i>	ISO 14001:2015 Environmental Management <i>BQV</i>	ISO 45001:2018 Occupational Health & Safety <i>BQV</i>
ISO 22301:2019 Business Continuity <i>EUROCERT</i>	ISO 46001:2019 Water Efficiency <i>BQV</i>	

Recycling of materials must be carried out in accordance with applicable regulations.