

ELECR
ENGINEERING



ELECR

Product Catalogue 2026

Improving water heating and sanitation globally since 1997



Passion

Our culture exudes passion for the industry, a desire to provide quality products and always relentlessly seeking perfection.



Expertise

Our team is valued for their knowledge, skills and expertise, dedicated to working together to deliver innovative products.



Quality

We pride ourselves on manufacturing superior products using high quality components and the care we take in our relationship to support our valued clients.



Integrity

We believe that business and our relationship with our clients should be undertaken with the highest levels of professionalism, integrity, honesty and fairness.



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CONTENTS

About Us.....	4
Our Team.....	8

ELECTRIC HEATERS	12
Nano Spa.....	14
Nano Splasher.....	16
Flowline 2.....	18
Evolution 2.....	20
Optima Compact.....	22
SFS Joey.....	24
Titan Optima.....	26
Nano Cygnet Aquatic Heater.....	28
Evolution 2 Cygnet Aquatic Heater.....	30
Poolsmart Plus.....	32

HEAT EXCHANGERS	34
G2 Multi Tubular.....	36
G2C Multi Tubular NEW!	38
SST (Shell & Spiral Tube).....	40
Escalade.....	42
Plate.....	44
Analogue Heat Controller.....	46
Heatsmart Plus & Koolsmart Plus.....	48

SOLAR HEATING	50
Thermecro.....	52

WATER DISINFECTION	56
H.R. UV-C.....	58
H.R. UV-C Spa.....	60
Quantum.....	62
Quantum Spa.....	64
Spectrum NEW!	68

Quantum - Setting new standards in pool hygiene and sustainability.....	66
General Conditions of Sales	70

ABOUT US

Established in 1997, we are a UK leading manufacturer and industry specialist in heating and disinfection products for commercial and residential swimming pools (including above ground pools), spas and aquatics. It has grown considerably both through our excellent reputation for producing outstanding products and forging lasting relationships with respected clients, many of whom form the core distributors for our products.

The company was originally formed by Roland May, an engineer by trade, who came up with the idea of building a heater in order to heat his children's pool. Very quickly interest from neighbouring houses arose and a business idea was born. With a few facility upgrades and a growing team of talented and enthusiastic staff, Elecro Engineering now export to over 80 countries across the globe.

Continuously researching and developing new innovations and technologies, the team at Elecro, utilise cutting edge components ensuring unparalleled product durability, safety and reliability. We closely scrutinise our entire product range and conduct market analysis to enable ourselves to understand the changing needs of our customers. All of our products meet huge expectations and high level specifications. Our design engineers work closely together with co-operation from our clients to re-engineer our products to evolve our business and continue to meet market demand.



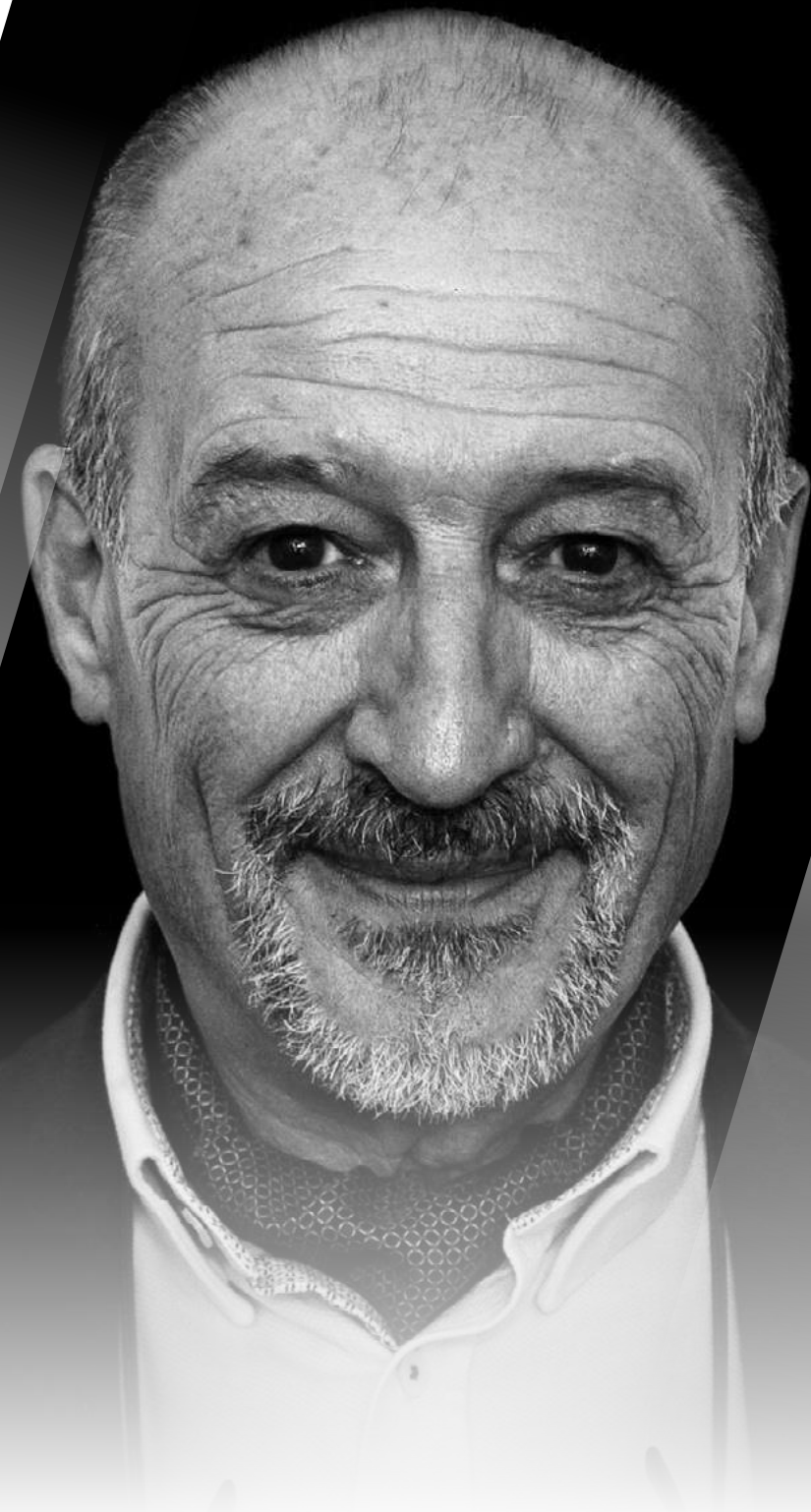
“

When challenges
are treated as
opportunities,
excellence
becomes
standard.”

Roland May

Founder

Roland originally founded Elecro, and exudes passion for designing and engineering products; enthusiasm that is spread throughout the company. Hailing from an engineering background, Roland saw a gap in the market and designed our first electric heater over 28 years ago; since then, Elecro have solidified their position as a leading manufacturer of electric swimming pool heaters, as well as heat exchangers and water treatment units. A key member of the Product Development team, Roland is continually working on new product solutions for the industry.



The company has a well-balanced geographic footprint with leadership positions in both developed and developing markets via a network of wholesalers, retailers and other distributors. Our sought-after products have grown to be a renowned brand in the industry, offering outstanding products of the highest quality and at extremely competitive prices. Our products are also efficient, being the choice of industry professionals worldwide, offering outstanding levels of sustainability.

Elecro Engineering have created a comprehensive and diverse range of high quality, innovative and advanced technological products, dedicated to being energy efficient and offering low running costs.

- **Electric Heaters:** Developed using advanced vortex technology, our spiral-wound titanium heating elements, specifically designed to prevent the build up of mineral deposits, are manufactured in-house and installed in every one of our products. Boasting robust, durable construction, titanium flow tubes and 100% efficiency throughout the life of the product, our heaters are built to last. They also include a minimum of two safety features for safe operation and to prevent over-heating.

- **Heat Exchangers:** Using hot water from the boiler, spiral, multi-tubular and plate titanium heat exchangers offer an energy-efficient and economical solution for maintaining a near constant year-round water temperature in spas and swimming pools.
- **Disinfection Equipment:** Our advanced, revolutionary photocatalytic, hydroxyl radical and UV technology offer a viable alternative to traditional chlorine and bromine chemical solutions taking pool hygiene and water clarity to the ultimate level.
- **Solar Heating:** Our patented solar panel heaters are an ideal secondary heating device that works in the lowest of ambient temperatures and unlike traditional solar panel systems are not reliant on outside temperatures or direct sunlight.

We maintain a loyal and dedicated partnership with our customers and work with them in an open and collaborative way to provide outstanding customer service, after sales and technical support for our growing range of products.

Our professionalism and commitment to quality is engrained in our ethos and echoed throughout the whole team at Elecro, which makes us a reliable partner, onwards into the future.



ELECO
ENGINEERING

Improving water
heating and disinfection
globally since 1997



ELECO
ENGINEERING

Management



Emily May

Company Director

Emily's background is deep rooted in Elecro and the swimming pool industry, and therefore her role as Company Director is vital to the company's growth and progression. Emily's priority is to oversee the business changing decisions and lead the way for future business and prospects.



Victor Nehme

Managing Director

victor@elecro.co.uk

Passionate about the pool industry since 2005, Victor has extensive knowledge of the world market. By studying widely used products and strengthening key partnerships, his mission is clear: with an MBA and strategic vision, he aims to inspire partners and end users to expect the best. Only when he exceeds these high standards will he feel truly satisfied.

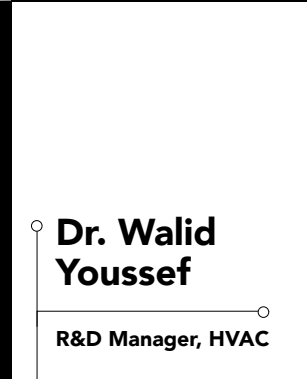
Research & Development



Malcolm Thomas

Design, Research and Development Engineer

Malcolm is our hidden gem. Working alongside Rafal, Malcolm designs and develops all of the Elecro products. Previously employed by Hitachi, Malcolm is meticulous, innovative and ensures streamlined, efficient design from concept through to production. He enjoys what he does and it shows.



Dr. Walid Youssef

R&D Manager, HVAC

Walid is a Chartered Engineer (CEng) and member of CIBSE with a Ph.D. Degree in heat pumps and renewable energy applications and MSc in Advanced Mechanical engineering – Thermodynamics. He has extensive experience in HVAC technologies in the building sector with direct experience in heat pumps.



Richard Townsend

Electronics Engineer

Richard is our experienced electronics engineer who constantly faces challenges at Elecro to solve the increasingly complex problems we encounter to improve our products. With the continued drive for improved functionality with our products there is never a dull day for Richard.



Dr. Camila Ribeiro

Chemical Engineer

Camila is a Chemical Engineer with an MSc. and Ph.D. in Chemical Engineering, with broad experience in non-conventional air and water treatment technologies. Passionate about R&D and challenge-driven, her role includes the development, improvement, and expansion of Elecro's disinfection products.

Elecro Engineering Ltd
+44 (0) 1438 749474

Customer Services
sales@elecro.co.uk

Administration
admin@elecro.co.uk

Accounts
accounts@elecro.co.uk



**David
Brooks**

Sales Manager
david.brooks@elecra.co.uk

With many years in the aquatic leisure industry, gaining a wealth of knowledge, David is customer focused, keen to develop relationships and determined to deliver.

David is responsible for:
South Asia, Southeast Asia & Gulf Region. Northern Europe & British Isles. Australia. Canada and North America.



**Simon
Lopez**

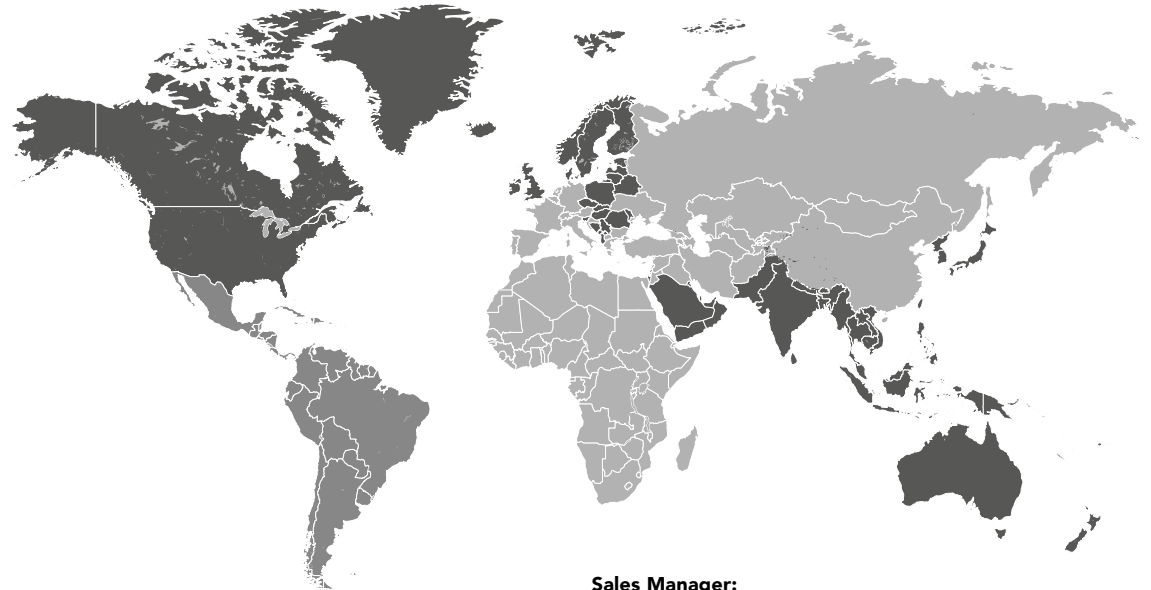
Sales Manager
simon.lopez@elecra.co.uk

Simon's experience in Electronic Engineering has proved invaluable at Elecra. He is a dynamic character with a positive attitude to everything he does.

Simon is responsible for:
North, Central, East & West Asia, excluding Gulf Region. South, East & West Europe, excluding British Isles. Africa. Central and South America.

WHO COVERS YOUR AREA?

Our products are exported and distributed across the world.



Sales Manager:

■ David Brooks ■ Simon Lopez



80+ Countries



400+ Distributors



180,000+ Installations

Technical Support
technical@elecra.co.uk

Purchasing
purchasing@elecra.co.uk

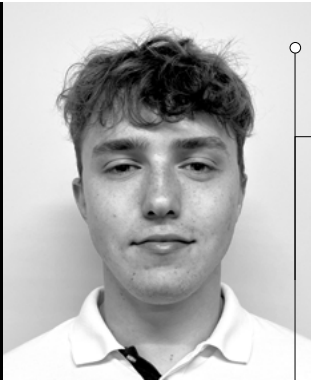
Marketing
marketing@elecra.co.uk



**Naomie
Page**

Company Accountant
accounts@elecro.co.uk

Naomie has many years of experience in various areas of accounting. She has a can-do attitude, takes pride in what she does and enjoys the many challenges that comes her way.



**Filip
Bogucki**

Customer Service
sales@elecro.co.uk

Filip is a results-driven customer service administrator with production experience here at Elecro. Dedicated to delivering exceptional service and creating happy customers through effective support and streamlined operations.



**Rafal
Misiewicz**

**Head of Manufacturing
and R&D**
technical@elecro.co.uk

Rafal definitely enjoys a challenge, and Elecro ensures that he always has a project on the go! A qualified electrician, he works on the product development team alongside Malcolm, Richard, Walid and Camila.



**Cheryl
Madden**

Customer Service
sales@elecro.co.uk

Cheryl is our longest serving Customer Service Assistant. Cheryl's wealth of product knowledge and her calm and responsive approach, ensures our customers needs are always met.

**Craig
Bushnell**

**Head of Marketing
and Graphic Design**
marketing@elecro.co.uk

Craig brings to Elecro a wealth of knowledge and experience in both marketing and graphic design having worked over 20 years in a London based marketing and design agency.

Craig has a keen eye for detail and very high standards when it comes to design.



**Nick
Jones**

Purchasing Manager
purchasing@elecro.co.uk

Nick has a wealth of previous experience in the automotive & general manufacturing industry. Nick is responsible for maintaining optimum stock levels and ensuring that all direct & indirect purchases are made in a timely manner in order to support production and the needs of the business overall. He is a committed team player and maintains a professional & ethical approach



**Subash
Balakrishnan**

**Production and
Factory Manager**
technical@elecro.co.uk

Subash is a Mechanical Engineer with over 7 years experience in the swimming pool, water treatment, chemical and hygiene dosing industry. Currently his roles include all technical documentation, flowswitch production and heat pump technical support. Subash is a rising star in the future of Elecro Engineering.



**Jerzy
Kaczerski**

Production Supervisor
technical@elecro.co.uk

Joining the team in 2017, Jerzy is responsible for the supervision of the UV Production Team and maintaining the high quality standards of our products. He is a highly skilled technician with a can-do attitude, sincere, dedicated and ready to help in anyway he can.



**Eva
Norvilaityte**

Production Supervisor
technical@elecro.co.uk

Eva supervises the production staff of our electrical heaters department. Ambitious and technical, Eva oversees the production process and quality control. Her skills, interest and very positive attitude, makes Eva the ideal candidate for this challenge.



**Sandor
Kerekes**

**Component Production
'Senior' Supervisor**
technical@elecro.co.uk

Sandor is an electrical engineer with over 16 years experience. With his vast knowledge and great interest in technology, Sandor has become the senior supervisor of our component production department. His role includes overseeing the entire production process from raw material selection to the finished product, and testing to ensure they comply with global standards.



**Lewis
Hawkins**

**Technical, Production
and Repairs Technician**
technical@elecro.co.uk

Lewis joined Elecro after leaving school, he gained experience on the factory floor and has since been promoted to the Production and Repairs Technician. He is ambitious, hard working and always willing to learn and help where he can.

Technical Support
technical@elecro.co.uk

Purchasing
purchasing@elecro.co.uk

Marketing
marketing@elecro.co.uk

Electric Heaters

by Elecro Engineering

Electric pool heaters offer a convenient, compact, and reliable solution for maintaining a comfortable swimming temperature year-round. With rapid heat-up times and precise temperature control, these units are perfect for any size residential or commercial pool or spa where simplicity and efficiency are key. For users, it means warm water on demand - without waiting for the sun or other external systems.

For installers, electric heaters are a straightforward solution with minimal footprint and seamless integration into existing systems. They require little maintenance, making them ideal for clients seeking reliable, low-hassle performance. Whether it's a backup heat source or the main system, electric heaters deliver consistent results with precise control.



“...enjoy a quiet
and extended
pool season.”

OUR ELECTRIC HEATERS AND POOLSMART CONTROLLER AT A GLANCE

Heater	For Pool Type					No. of Models	Power Output (kW)	Plug Included	Titanium Heating Element	Titanium Flow Tube	Analogue Control	Digital Control	Touch Screen/Programmable	Sea & Salt Chlorinated Water Safe	Wall & Floor Mountable
	Spa	Above-Ground	Residential	Commercial	Aquatics*										
Nano Spa	●					11	1 - 8		●	●	●			●	●
Nano Splasher		●				7	1 - 3	●	●	●	●			●	●
Flowline 2	●	●	●			20	1 - 24		●	●	●			●	●
Evolution 2	●	●	●			23	1 - 24		●	●	●	●		●	●
Optima Compact	●	●	●			23	1 - 24		●	●			●	●	●
SFS Joey				●		19	18 - 120		●	●	●	●		●	●
Titan Optima				●		19	18 - 120		●	●			●	●	●
Nano Cygnet					●	7	1 - 4	●▲	●	●	●			●	●
Evolution 2 Cygnet					●	11	1 - 8.4		●	●	●	●		●	●

* Aquatics refers to ponds and large aquariums. ▲ Nano Cygnet 4kW - No plug included.

Controller	Heating	Cooling	Analogue	Touch Screen Programmable	Electric Heater/Heat Exchanger Compatibility										Flow Sensor Ports	Temp Sensor Ports	Multi-lingual Interface	Optional Grundfos Booster Pump
					All Nano Models	Flowline 2	Evo 2	Optima Compact	SFS Joey	Titan Optima	G2	SST	Escalade	Plate				
Poolsmart Plus	●			●	●	●	●	●	●	●					●	●	●	

SYSTEM SETUP

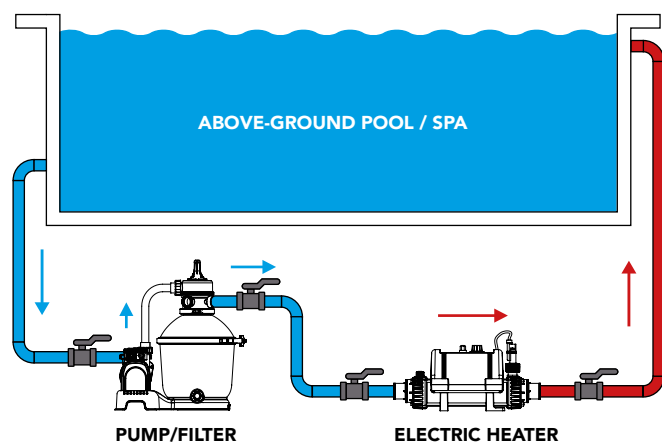


Fig 1. Connecting to an above-ground pool or spa

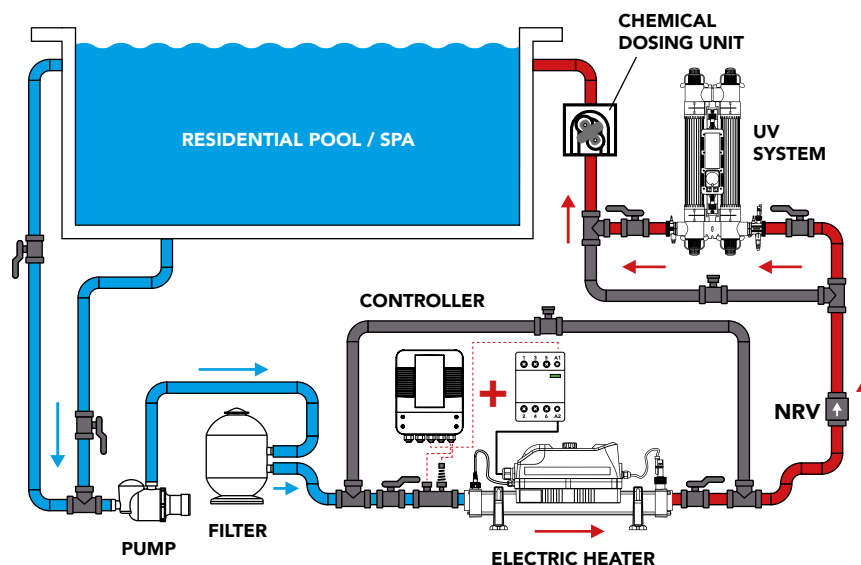


Fig 2. Connecting to a residential pool or spa

These are the common setups for spas, swimming pools, and above-ground pools. The electric pool heater should be positioned after the pump and filter but before the UV system. This ensures that the water entering the heater is clean and free of debris, which helps protect the heater from damage and improves its efficiency. Placing the heater before the UV system also ensures that the water is heated before it undergoes UV treatment, which is more effective at higher temperatures and helps maintain optimal disinfection performance.

If a chemical dosing unit is installed, the UV system should be placed before it to prevent degradation of the chemicals.



ELECTRIC HEATER

NANO SPA

Compact, silent, and built for spa comfort, the Nano Spa is Elecra's most space-saving heater for residential spas. With a fully titanium flow tube and heating element, it delivers reliable, corrosion-resistant performance and heats water up to 45°C with flow rates as low as 1m³/h. Easy to install and equipped with dual safety features, the Nano Spa offers efficient, worry-free heating in even the smallest spaces.

Number of Models

11

Power Options

1-kW to 8-kW

Flow Rates

1m³/h to 17m³/h

Ingress Protection Rating

44

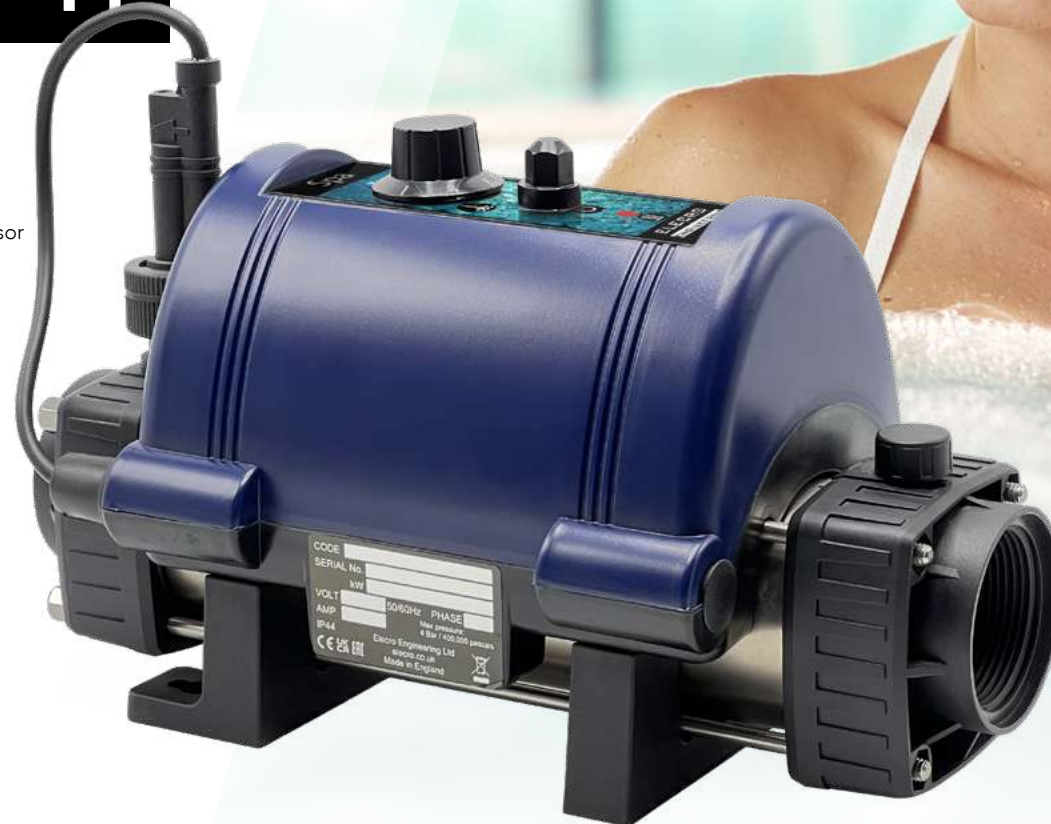
FEATURES

- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Analogue control with 1.2°C differential
- Titanium flow tube and titanium heating element
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation



For the data sheet and spare parts list, scan this QR code, or visit elecra.co.uk/product/nano-spa

For system setup, see page 13



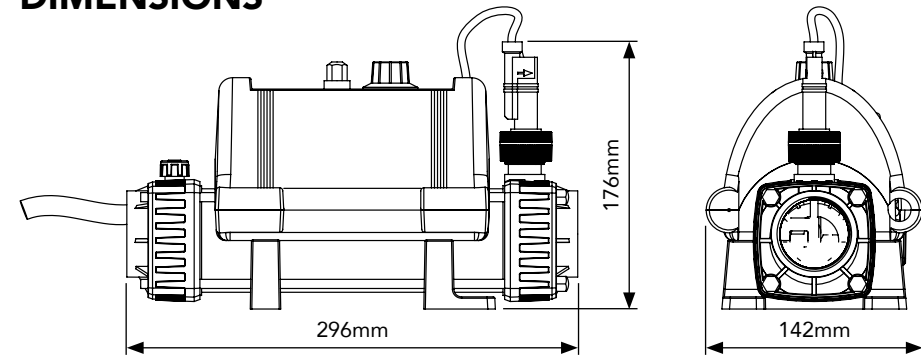
SPECIFICATIONS

Power supply:	Single phase or 3-Phase
Min. flow rate:	1m ³ /h
Max. flow rate:	17m ³ /h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Analogue: 0 > 45°C (1.2°C differential)
Safety thermal cut out:	60°C (manual reset)
Flow switch:	Rhodium tipped reed switch with titanium fulcrum pin
Relay:	Surface mount DPDT finder 66.82.8.230.0000
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	1½" BSP female thread supplied with 1½"/50mm stepped PVC unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
IP rating:	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

KEY FEATURES



DIMENSIONS



MODELS

MODEL	POWER OUTPUT	LOAD (amp)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m ³)	PRODUCT CODE
220~240V 1-Phase	1-kW	4.5	2.83	3.54	0.0195	N-SPA-T1-R
	2-kW	8.5	2.83	3.54	0.0195	N-SPA-T2-R
	3-kW	12	2.83	3.54	0.0195	N-SPA-T3-R
	4-kW	18	2.83	3.54	0.0195	N-SPA-T4-R
	4.5-kW	20	2.83	3.54	0.0195	N-SPA-T4.5-R
	5-kW	22	2.83	3.54	0.0195	N-SPA-T5-R
400V 3-Phase*	6-kW	26	2.83	3.54	0.0195	N-SPA-T6-R
	8-kW	20	2.83	3.54	0.0195	N-SPA-T8-R
120V 1-Phase	1-kW	8.5	2.83	3.54	0.0195	N-SPA-T1-R-USA
	1.5-kW	12.5	2.83	3.54	0.0195	N-SPA-T1.5-R-USA
	2-kW	17	2.83	3.54	0.0195	N-SPA-T2-R-USA

*For voltages other than 400V, please add -380, -415 or -480 at the end of a product code e.g: N-SPA-T8-R-380. For any other voltages or custom builds, please contact our sales team sales@elecro.co.uk

ACCESSORIES (Included)



ELECTRIC HEATER

NANO SPLASHER

Compact, efficient, and ready to plug in, the Nano Splasher is Elecro's most popular heater for soft and hard-sided above-ground pools. With a fully titanium flow tube and heating element, it delivers silent operation, reliable performance, and maximum safety. Designed for flow rates from 1m³/h to 17m³/h, it heats water up to 45°C with ease - making it the perfect user-friendly solution for quick, hassle-free pool heating.

Number of
Models

6

Power Options

**1-kW to
3-kW**

Flow Rates

**1m³/h to
17m³/h**

Ingress
Protection Rating

44

FEATURES

- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Analogue control with 1.2°C differential
- Titanium flow tube and titanium heating element
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/nano-splasher

For system setup, see page 13

**'Plug
& Play'**

Suitable for:



Above-Ground
Pools



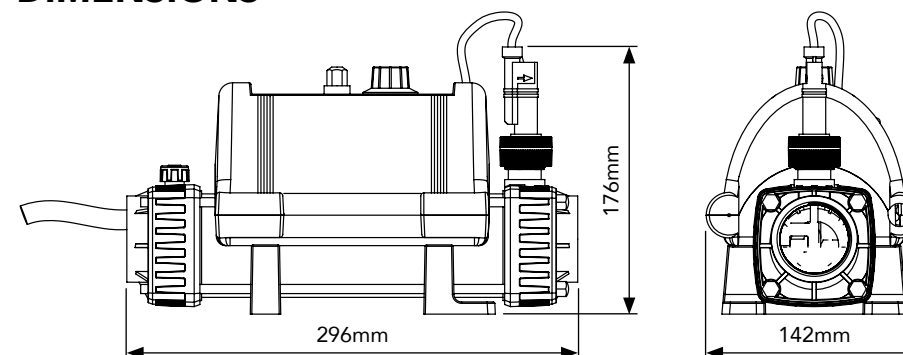
SPECIFICATIONS

Power supply:	Single phase
Min. flow rate:	1m ³ /h
Max. flow rate:	17m ³ /h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Analogue: 0 > 45°C (1.2°C differential)
Safety thermal cut out:	60°C (manual reset)
Flow switch:	Rhodium tipped reed switch with titanium fulcrum pin
Relay:	Surface mount DPDT finder 66.82.8.230.0000
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	1½" BSP female thread supplied with 1½"/50mm stepped PVC unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
IP rating:	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

KEY FEATURES



DIMENSIONS



MODELS

MODEL	POWER OUTPUT	LOAD (amp)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m ³)	PRODUCT CODE
220~240V 1-Phase	2-kW	8.5	2.83	3.54	0.0195	N-AGP-UK-T2*
	3-kW	12	2.83	3.54	0.0195	N-AGP-UK-T*
	2-kW	8.5	2.83	3.54	0.0195	N-AGP-EU-T2*
	3-kW	12	2.83	3.54	0.0195	N-AGP-EU-T*
120V 1-Phase	1-kW	8.5	2.83	3.54	0.0195	N-AGP-USA-T1*
	1.5-kW	12.5	2.83	3.54	0.0195	N-AGP-USA-T1.5*

For other plug types, please contact our sales team sales@elecro.co.uk

ACCESSORIES (Included)



ELECTRIC HEATER

FLOWLINE 2

Reliable, efficient, and built for versatility, the Flowline 2 is a non-wired electric pool heater, ideal for professional installers to integrate seamlessly into bespoke setups using external contactors, allowing tailored wiring to suit specific site requirements. Featuring a fully titanium flow tube and heating element, the Flowline 2 offers silent operation, precise temperature control, and long-lasting durability.

Number of
Models

20

Power Options

**1-kW to
24-kW**

Flow Rates

**1m³/h to
17m³/h**

Ingress
Protection Rating

44

FEATURES

- Non-wired. Requires connection to external contactor
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Analogue control with 1.2°C differential
- Titanium flow tube and titanium heating element(s)
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/flowline-2

For system setup, see page 13

Suitable for:



Above-Ground
Pools



Spas



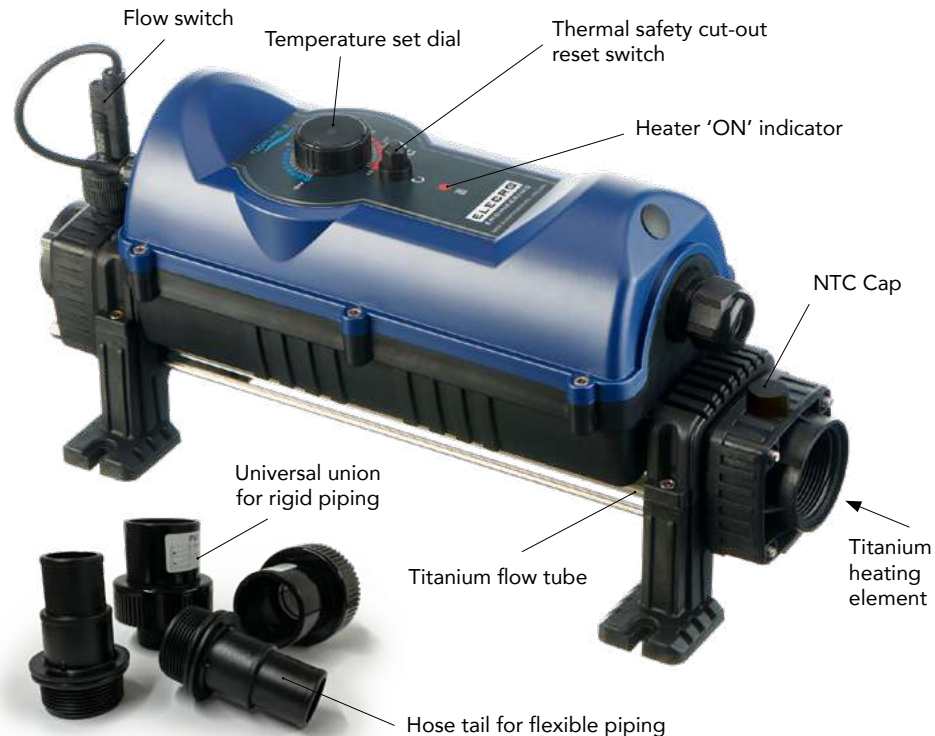
Residential
Pools



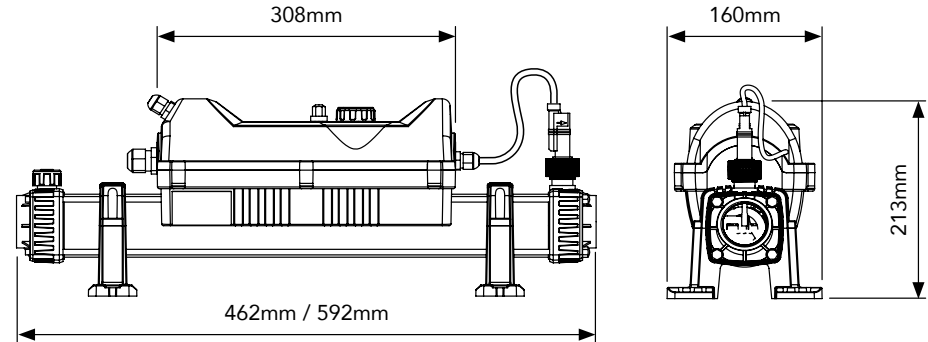
SPECIFICATIONS

Power supply:	Single phase or 3-Phase
Min. flow rate:	Up to 3-kW: 1m³/hr, 4-kW to 6-kW: 1.5m³/hr, 8.4-kW & greater: 4m³/hr
Max. flow rate:	17m³/h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Analogue: 0 > 45°C (1.2°C differential)
Safety thermal cut out:	60°C (manual reset)
Flow switch:	Rhodium tipped reed switch with titanium fulcrum pin
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	1½" BSP female thread supplied with 1½"/50mm stepped PVC unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
IP rating:	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

KEY FEATURES



DIMENSIONS



MODELS

MODEL	POWER OUTPUT	LOAD (amp)	LENGTH (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE
220~240V 1-Phase	1-kW	4.5	462	2.936	4.230	0.046	FL2-1-1
	2-kW	8.5	462	2.936	4.230	0.046	FL2-1-2
	3-kW	13	462	2.936	4.230	0.046	FL2-1-3
	4.5-kW	20	462	2.936	4.230	0.046	FL2-1-4.5
	6-kW	26	462	2.936	4.230	0.046	FL2-1-6
	9-kW	40	462	3.236	4.530	0.046	FL2-1-9
400V 3-Phase*	6-kW	9	592	3.656	4.950	0.046	FL2-3-6
	9-kW	13	592	3.656	4.950	0.046	FL2-3-9
	12-kW	18	592	3.656	4.950	0.046	FL2-3-12
	15-kW	22	592	3.656	4.950	0.046	FL2-3-15
	18-kW	26	592	3.656	4.950	0.046	FL2-3-18
	24-kW	34	592	3.656	4.950	0.046	FL2-3-24
220~240V 3-Phase**	6-kW	15	592	3.726	5.020	0.046	FL2-3-6-D
	9-kW	23	592	3.726	5.020	0.046	FL2-3-9-D
	12-kW	30	592	3.726	5.020	0.046	FL2-3-12-D
	15-kW	38	592	3.726	5.020	0.046	FL2-3-15-D
120V 1-Phase	1-kW	8.5	462	2.936	4.230	0.046	FL2-1-1-120
	1.5-kW	12.5	462	2.936	4.230	0.046	FL2-1-1.5-120
	2-kW	17	462	2.936	4.230	0.046	FL2-1-2-120

* For voltages other than 400V, please add -380, -415 or -480 at the end of a product code e.g: FL2-3-6-380. ** For voltage 208V please add: -208 at the end of a product code e.g: FL2-3-6-D-208. For any other voltages or custom builds, please contact our sales team sales@elecro.co.uk

ELECTRIC HEATER

EVOLUTION 2

Efficient, safe, and trusted worldwide, the Evolution 2 is Elecro's most popular electric pool heater, chosen by owners and pool professionals across the globe. Featuring a fully titanium flow tube and heating element, it delivers silent operation, precise temperature control, and long-term reliability. Available with analogue or multilingual digital display, the Evolution 2 combines robust construction with effortless performance, making it the go-to solution for heating pools and spas of all sizes.

Number of
Models

23

Power Options

**1-kW to
24-kW**

Flow Rates

**1m³/h to
17m³/h**

Ingress
Protection Rating

44

FEATURES

- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Analogue control with 1.2°C differential or digital control with 0.5°C differential and selectable multi-lingual display
- Titanium flow tube and titanium heating element
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/evolution-2

For system setup, see page 13

Suitable for:



Above-Ground
Pools



Spas



Residential
Pools



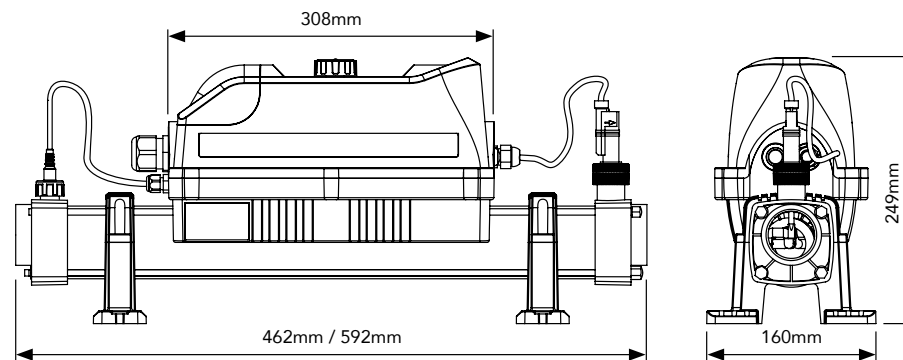
SPECIFICATIONS

Power supply:	Single phase or 3-Phase
Min. flow rate:	Up to 3-kW: 1m ³ /hr, 4-kW to 6-kW: 1.5m ³ /hr, 8.4-kW & greater: 4m ³ /hr
Max. flow rate:	17m ³ /h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Analogue: 0 > 45°C (1.2°C differential). Digital: 0 > 45°C (0.5°C differential)
Safety thermal cut out:	60°C (manual reset)
Flow switch:	Rhodium tipped reed switch with titanium fulcrum pin
Contactors:	Siemens 3RT2023 or 3RT2027
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	1½" BSP female thread supplied with 1½"/50mm stepped PVC unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
IP rating	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

KEY FEATURES



DIMENSIONS



MODELS

MODEL	POWER OUTPUT	LOAD (amp)	LENGTH (mm)	NET# WEIGHT (kg)	GROSS# WEIGHT (kg)	VOLUME (m ³)	PRODUCT CODE	
							ANALOGUE	DIGITAL
220~240V 1-Phase	1-kW	4.5	462	3.930	5.530	0.057	E2-1-1	E2D-1-1
	2-kW	8.5	462	3.930	5.530	0.057	E2-1-2	E2D-1-2
	3-kW	13	462	3.930	5.530	0.057	E2-1-3	E2D-1-3
	4.5-kW	20	462	3.930	5.530	0.057	E2-1-4	E2D-1-4
	6-kW	26	462	3.930	5.530	0.057	E2-1-6	E2D-1-6
	9-kW	40	462	4.230	5.830	0.057	E2-1-9	E2D-1-9
	12-kW	53	592	4.230	5.830	0.057	E2-1-12	E2D-1-12
	15-kW	66	592	4.550	6.150	0.057	E2-1-15	E2D-1-15
	18-kW	79	462	4.550	6.150	0.057	E2-1-18	E2D-1-18
Versatile* 230V 1-Phase 400V 3-Phase	6-kW	26/8.5	592	4.770	6.370	0.057	E2-V-6	E2D-V-6
	9-kW	40/13	592	4.770	6.370	0.057	E2-V-9	E2D-V-9
	12-kW	53/18	592	4.770	6.370	0.057	E2-V-12	E2D-V-12
400V 3-Phase*	15-kW	22	592	4.550	6.150	0.057	E2-3-15	E2D-3-15
	18-kW	26	592	4.550	6.150	0.057	E2-3-18	E2D-3-18
	24-kW	34	592	4.550	6.150	0.057	E2-3-24	E2D-3-24
220~240V 3-Phase**	6-kW	15	592	4.550	6.150	0.057	E2-3-6-D	E2D-3-6-D
	9-kW	23	592	4.550	6.150	0.057	E2-3-9-D	E2D-3-9-D
	12-kW	30	592	4.550	6.150	0.057	E2-3-12-D	E2D-3-12-D
	15-kW	38	592	4.550	6.150	0.057	E2-3-15-D	E2D-3-15-D
120V 1-Phase	18-kW	46	592	4.550	6.150	0.057	E2-3-18-D	E2D-3-18-D
	1-kW	8.5	462	3.930	5.530	0.057	E2-1-1-120	E2D-1-1-120
	1.5-kW	12.5	462	3.930	5.530	0.057	E2-1-1.5-120	E2D-1-1.5-120
	2-kW	17	462	3.930	5.530	0.057	E2-1-2-120	E2D-1-2-120

* For voltages other than 400V, please add -380, -415 or -480 at the end of a product code e.g. E2-3-15-380. ** For voltage 208V please add: -208 at the end of a product code e.g. E2-3-6-D-208. Weights stated above are for analogue models only. #Please subtract 0.17kg for digital models. For any other voltages or custom builds, please contact our sales team sales@elecro.co.uk

ELECTRIC HEATER

OPTIMA COMPACT

Smart, efficient, and built to last, the Optima Compact is Elecro's premium residential pool heater, designed for homeowners who demand performance and style. With a fully titanium heating element, advanced safety features, and intuitive touchscreen controls, it offers precise temperature management and seamless integration into modern lifestyles. Compact yet powerful, it's the ideal solution for pools and spas where reliability, efficiency, and sleek design matter most.

Number of
Models

23

Power Options

**1-kW to
24-kW**

Flow Rates

**1m³/h to
17m³/h**

Ingress
Protection Rating

44

FEATURES

- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Touchscreen control with soft-start for power supply protection
- Titanium flow tube and titanium heating element(s)
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/optima-compact

For system setup, see page 13



Suitable for:



Above-Ground
Pools



Spas



Residential
Pools

SIMPLIFY YOUR LIFE WITH THE ELECR0 APP

Connection via Wi-Fi, 4G and Cloud enables you to take full control of your swimming pool heating from anywhere in your home or office, with a simple app on your smartphone.



For connectivity, please refer to your device manual.

www.elecro.co.uk

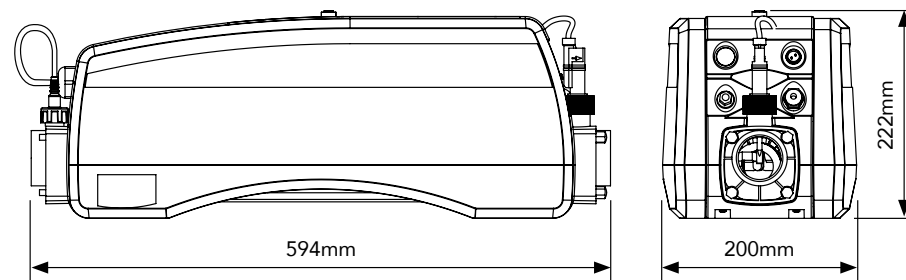
SPECIFICATIONS

Power supply:	Single phase or 3-Phase
Min. flow rate:	Up to 3-kW: 1m³/hr, 4-kW to 6-kW: 1.5m³/hr, 8.4-kW & greater: 4m³/hr
Max. flow rate:	17m³/h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Touch Screen 0 > 45°C (0.5°C differential)
Safety thermal cut out:	60°C (manual reset)
Flow switch:	Rhodium tipped reed switch with titanium fulcrum pin
Contactors:	Dual Siemens 3RT2023 or 3RT2027
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	1½" BSP female thread supplied with 1½"/50mm stepped PVC unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
IP rating	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

KEY FEATURES



DIMENSIONS



MODELS

MODEL	POWER OUTPUT	LOAD (amp)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE
220~240V 1-Phase	1-kW	4.5	7.190	8.830	0.057	OCPD-1-1
	2-kW	8.5	7.190	8.830	0.057	OCPD-1-2
	3-kW	12	7.190	8.830	0.057	OCPD-1-3
	4.5-kW	20	7.190	8.830	0.057	OCPD-1-4
	6-kW	26	7.190	8.830	0.057	OCPD-1-6
	9-kW	40	7.510	9.150	0.057	OCPD-1-9
	12-kW	53	7.510	9.150	0.057	OCPD-1-12
	15-kW	66	7.840	9.480	0.057	OCPD-1-15
	18-kW	79	7.840	9.480	0.057	OCPD-1-18
230/400V Versatile*	6-kW	26/8.5	7.720	9.360	0.057	OCPD-V-6
	9-kW	40/13	7.720	9.360	0.057	OCPD-V-9
	12-kW	53/18	7.720	9.360	0.057	OCPD-V-12
400V 3-Phase*	15-kW	22	7.720	9.360	0.057	OCPD-3-15
	18-kW	26	7.720	9.360	0.057	OCPD-3-18
	24-kW	34	7.720	9.360	0.057	OCPD-3-24
220~240V 3-Phase**	6-kW	15	7.720	9.360	0.057	OCPD-3-6-D
	9-kW	23	7.720	9.360	0.057	OCPD-3-9-D
	12-kW	30	7.720	9.360	0.057	OCPD-3-12-D
	15-kW	38	7.720	9.360	0.057	OCPD-3-15-D
120V 1-Phase	18-kW	46	7.720	9.360	0.057	OCPD-3-18-D
	1-kW	8.5	7.190	8.830	0.057	OCPD-1-1-120
	1.5-kW	12.5	7.190	8.830	0.057	OCPD-1-1.5-120
	2-kW	17	7.190	8.830	0.057	OCPD-1-2-120

* For voltages other than 400V please add: -380, -415 or -480 at the end of a product code e.g: OCPD-3-15-380. ** For voltage 208V please add: -208 at the end of a product code e.g: OCPD-3-6-D-208. For any other voltages or custom builds, please contact our sales team sales@elecro.co.uk

Suitable for:



ELECTRIC HEATER

SFS JOEY

Engineered for reliability, precision, and endurance, the SFS Joey is Elecro's fully titanium commercial pool heater, purpose-built for demanding environments. Designed to thrive in high TDS conditions, debris-laden water, and low-flow systems, it delivers consistent high-temperature performance with exceptional durability. Ideal for commercial pools, the SFS Joey combines robust construction with advanced safety features, ensuring long-term efficiency and peace of mind.

Number of
Models

19

Power Options

**18-kW to
120-kW**

Flow Rates

**8m³/h to
15m³/h**

Ingress
Protection Rating

44

FEATURES

- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Analogue control with 1.2°C differential or digital control with 0.5°C differential and selectable multi-lingual display
- Titanium flow tube and titanium heating element(s)
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/sfs-joeey

For system setup, see page 13



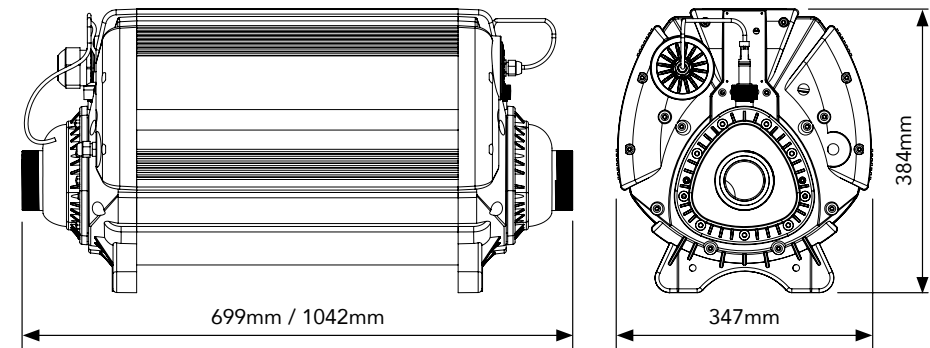
SPECIFICATIONS

Power supply:	3-Phase
Min. flow rate:	8m³/h (Recommended)
Max. flow rate:	15m³/h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Analogue: 0 > 40°C (1.2°C differential), Digital: 0 > 40°C (0.5°C differential)
Safety thermal cut out:	65°C (auto reset) against enclosure over-temperature 60°C (manual reset)
Flow switch:	Rhodium tipped reed switch with titanium fulcrum pin
Contactors:	Cascade wired dual Siemens 3RT2023 or 3RT2027 for each element bank
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	63mm spigot with 2"/63mm stepped ABS unions
IP rating	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

KEY FEATURES



DIMENSIONS



MODELS

MODEL	POWER OUTPUT	LOAD (amp)	LENGTH (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE	
							ANALOGUE	DIGITAL
400V 3-Phase*	18-kW	26	699	20.800	24.400	0.188	SFS-18	SFSD-18
	24-kW	34	699	20.800	24.400	0.188	SFS-24	SFSD-24
	30-kW	44	699	20.800	24.400	0.188	SFS-30	SFSD-30
	36-kW	53	699	20.800	24.400	0.188	SFS-36	SFSD-36
	45-kW	66	699	23.200	26.800	0.188	SFS-45	SFSD-45
	54-kW	79	699	23.200	26.800	0.188	SFS-54	SFSD-54
	60-kW	87	699	23.800	27.400	0.188	SFS-60	SFSD-60
	72-kW	105	699	23.800	27.400	0.188	SFS-72	SFSD-72
	96-kW	139	1042	32.800	36.400	0.269	SFS-96	SFSD-96
	120-kW	174	1042	34.100	38.400	0.269	SFS-120	SFSD-120
220~240V 3-Phase**	18-kW	46	699	21.000	24.600	0.188	SFS-18-D	SFSD-18-D
	24-kW	61	699	21.000	24.600	0.188	SFS-24-D	SFSD-24-D
	30-kW	76	699	21.000	24.600	0.188	SFS-30-D	SFSD-30-D
	36-kW	91	699	21.000	24.600	0.188	SFS-36-D	SFSD-36-D
	45-kW	114	699	23.800	27.400	0.188	SFS-45-D	SFSD-45-D
	54-kW	136	699	23.800	27.400	0.188	SFS-54-D	SFSD-54-D
	60-kW	151	1042	32.100	36.400	0.269	SFS-60-D	SFSD-60-D
	72-kW	181	1042	32.100	36.400	0.269	SFS-72-D	SFSD-72-D
	90-kW	227	1042	34.100	38.400	0.269	SFS-90-D	SFSD-90-D

* For voltages other than 400V, please add -380, -415 or -480 at the end of a product code e.g: SFS-36-380

** For voltage 208V please add: -208 at the end of a product code e.g: SFS-18-D-208

For any other voltages or custom builds, please contact our sales team sales@elecro.co.uk

Suitable for:



ELECTRIC HEATER

TITAN OPTIMA

Powerful, intelligent, and built to endure, the Titan Optima is Elecra's flagship commercial pool heater, engineered for high-demand environments. With a fully titanium flow tube and heating element, it delivers silent, corrosion-resistant performance and 100% efficiency throughout its lifespan. Featuring a sleek touchscreen interface and remote access via the TouchSmart app, the Titan Optima offers precise control, robust safety features, and long-term reliability for commercial pools of any size.

Number of Models

19

Power Options

18-kW to 120-kW

Flow Rates

12m³/h to 45m³/h

Ingress Protection Rating

44

FEATURES

- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Touchscreen control with soft-start for power supply protection
- Titanium flow tube and titanium heating element(s)
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Sea and salt chlorinated water compatible
- Can be floor or vertically wall mounted
- Silent operation



For the data sheet and spare parts list, scan this QR code, or visit elecra.co.uk/product/titan-optima

For system setup, see page 13



SIMPLIFY YOUR LIFE WITH THE ELECRAPP

Connection via Wi-Fi, 4G and Cloud enables you to take full control of your swimming pool heating from anywhere in your home or office, with a simple app on your smartphone.



For connectivity, please refer to your device manual.

www.elecra.co.uk

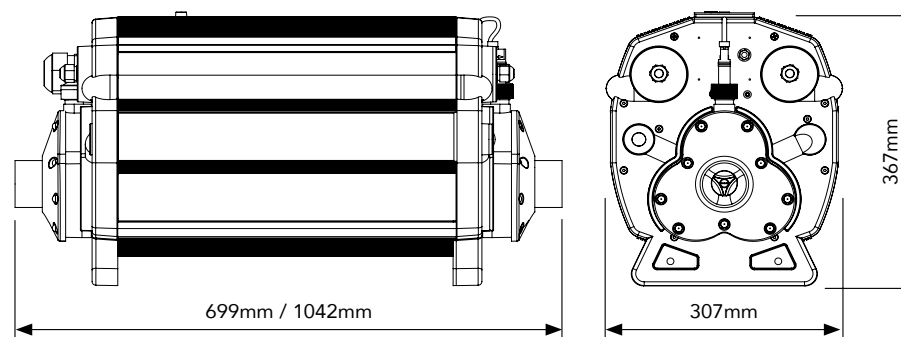
SPECIFICATIONS

Power supply:	3-Phase
Min. flow rate:	12m³/h
Max. flow rate:	45m³/h. (Recommended: 30m³/h)
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Touch Screen 0 > 45°C (0.5°C differential)
Safety thermal cut out:	65°C (auto reset) against enclosure over-temperature 60°C (manual reset)
Flow switch:	Rhodium tipped reed switch with titanium fulcrum pin
Contactors:	Cascade wired dual Siemens 3RT2023 or 3RT2027 for each element bank
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	63mm spigot with 2" / 63mm stepped ABS unions
IP rating	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

KEY FEATURES



DIMENSIONS



MODELS

MODEL	POWER OUTPUT	LOAD (amp)	LENGTH (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE
400V 3-Phase*	18-kW	26	699	19.900	23.500	0.188	CP-TS-18
	24-kW	34	699	19.900	23.500	0.188	CP-TS-24
	30-kW	44	699	19.900	23.500	0.188	CP-TS-30
	36-kW	53	699	19.900	23.500	0.188	CP-TS-36
	45-kW	66	699	22.300	25.900	0.188	CP-TS-45
	54-kW	79	699	22.300	25.900	0.188	CP-TS-54
	60-kW	87	699	22.900	26.500	0.188	CP-TS-60
	72-kW	105	699	22.900	26.500	0.188	CP-TS-72
	96-kW	139	1042	31.200	35.500	0.269	CP-TS-96
	120-kW	174	1042	33.200	37.500	0.269	CP-TS-120
220~240V 3-Phase**	18-kW	46	699	19.900	23.500	0.188	CP-TS-18-D
	24-kW	61	699	19.900	23.500	0.188	CP-TS-24-D
	30-kW	76	699	19.900	23.500	0.188	CP-TS-30-D
	36-kW	91	699	19.900	23.500	0.188	CP-TS-36-D
	45-kW	114	699	22.300	25.900	0.188	CP-TS-45-D
	54-kW	136	699	22.900	26.500	0.188	CP-TS-54-D
	60-kW	151	1042	22.900	26.500	0.188	CP-TS-60-D
	72-kW	181	1042	22.900	26.500	0.188	CP-TS-72-D
	90-kW	227	1042	33.200	37.500	0.269	CP-TS-90-D

* For voltages other than 400V, please add -380, -415 or -480 at the end of a product code e.g: CP-TS-18-380

** For voltage 208V please add: -208 at the end of a product code e.g: CP-TS-18-D-208

For any other voltages or custom builds, please contact our sales team sales@elecro.co.uk

ALL TITANIUM POND/AQUARIUM HEATER

NANO CYGNET

**'Plug*
& Play'**

*1-kW to 3-kW models only

Suitable for:



Compact, efficient, and built for aquatic environments, the Nano Cygnet is Elecro's plug-and-play electric heater for ponds and large aquariums. With a fully titanium flow tube and heating element, it offers silent operation, precise temperature control, and long-term corrosion resistance. Designed for flow rates as low as 1m³/h, it features a thermostat dial and built-in thermal cut-out for safe, reliable heating, making it the ideal choice for aquatic systems of all sizes.

Number of
Models

7

Power Options

**1-kW to
4-kW**

Flow Rates

**1m³/h to
17m³/h**

Ingress
Protection Rating

44

FEATURES

- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Analogue control with 1.2°C differential
- Titanium flow tube and titanium heating element
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Fresh and salt water compatible
- Can be floor or vertically wall mounted
- Silent operation



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/nano-cygnet

For system setup, see page 13



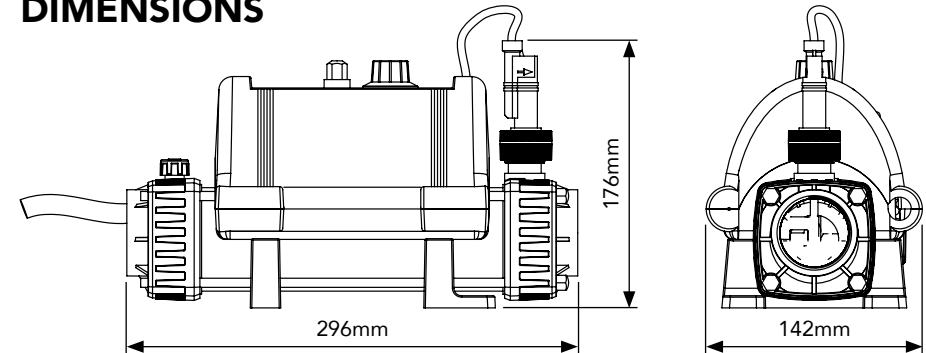
SPECIFICATIONS

Power supply:	Single phase
Min. flow rate:	1m³/h
Max. flow rate:	17m³/h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Analogue: 0 > 45°C (1.2°C differential)
Safety thermal cut out:	60°C (manual reset)
Flow switch:	Rhodium tipped reed switch with titanium fulcrum pin
Relay:	Surface mount DPDT finder 66.82.8.230.0000
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	1½" BSP female thread supplied with 1½"/50mm stepped PVC unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
IP rating	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

KEY FEATURES



DIMENSIONS



MODELS

MODEL	POWER OUTPUT	LOAD (amp)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE		
						UK PLUG	EU PLUG	USA PLUG
220~240V 1-Phase	1-kW	4.5	2.38	3.54	0.019	KC-1-UK-T	KC-1-EU-T	-
	2-kW	8.5	2.38	3.54	0.019	KC-2-UK-T	KC-2-EU-T	-
	3-kW	12	2.38	3.54	0.019	KC-3-UK-T	KC-3-EU-T	-
	4-kW	18	2.38	3.54	0.019	KC-4-T*	KC-4-T*	-
120V 1-Phase	1-kW	8.5	2.38	3.54	0.019	-	-	KC-1-USA-T
	1.5-kW	12.5	2.38	3.54	0.019	-	-	KC-1.5-USA-T
	2-kW	17	2.38	3.54	0.019	-	-	KC-2-USA-T

* Does not include a plug and must be installed by a qualified electrician. For other plug types, please contact our sales team at sales@elecro.co.uk

ACCESSORIES (Included)



ALL TITANIUM POND/AQUARIUM HEATER

EVOLUTION 2 CYGNET

Compact, efficient, and built for aquatic life, the Evolution 2 Cygnet is Elecro's premium electric heater for ponds and aquariums. With a fully titanium flow tube and low watt density heating element, it delivers silent, corrosion-resistant performance and precise temperature control. Suitable for fresh or saltwater environments, it features analogue or digital control and built-in safety systems, making it the ideal solution for reliable, long-term aquatic heating.

Number of
Models**11**

Power Options

**1-kW to
8.4-kW**

Flow Rates

**1m³/h to
17m³/h**Ingress
Protection Rating**44**

FEATURES

- Easy installation, fully equipped and pre-wired
- Robust, durable construction and compact design
- Ultra-reliable flow switch for safe operation
- Fitted with temperature thermostat and overheating sensor
- Analogue control with 1.2°C differential or digital control with 0.5°C differential and selectable multi-lingual display
- Titanium flow tube and titanium heating element
- Vortex, long life, stay clean heating element technology
- 100% efficiency throughout the product life
- Fresh and salt water compatible
- Can be floor or vertically wall mounted
- Silent operation



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/evolution-2-cygnet

For system setup, see page 13



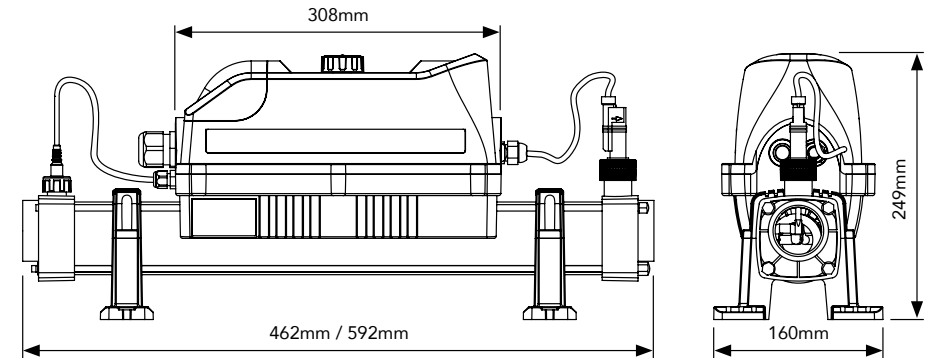
SPECIFICATIONS

Power supply:	Single phase or 3-Phase
Min. flow rate:	1m³/hr
Max. flow rate:	17m³/h
Heating element:	Grade 1 titanium
Flow tube:	Grade 1 titanium
Control thermostat:	Analogue: 0 > 45°C (1.2°C differential) Digital: 0 > 45°C (0.5°C differential)
Safety thermal cut out:	60°C (manual reset)
Flow switch:	Rhodium tipped reed switch with titanium fulcrum pin
Contactors:	Siemens 3RT2023 or 3RT2027
Seals:	High temperature special formula EPDM ferrules. TPE end fitting gaskets
Water connections:	1½" BSP female thread supplied with 1½"/50mm stepped PVC unions for rigid pipe and 1½"/1¼" stepped hose tails for flexible pipe
IP rating	IP44
Frequency:	50/60 Hz
Working pressure:	4 bar maximum
Mounting:	Floor or wall mounting

KEY FEATURES



DIMENSIONS



MODELS

MODEL	POWER OUTPUT	LOAD (amp)	LENGTH (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE	
							ANALOGUE	DIGITAL
220~240V 1-Phase	1-kW	4.5	462	3.36	4.90	0.057	AQ-E2-1-1	AQ-E2D-1-1
	2-kW	8.5	462	3.36	4.90	0.057	AQ-E2-1-2	AQ-E2D-1-2
	3-kW	12	462	3.36	4.90	0.057	AQ-E2-1-3	AQ-E2D-1-3
	4-kW	18	462	3.36	4.90	0.057	AQ-E2-1-4	AQ-E2D-1-4
	6-kW	26	462	3.66	5.20	0.057	AQ-E2-1-6	AQ-E2D-1-6
	8-kW	35	592	3.66	5.20	0.057	AQ-E2-1-8	AQ-E2D-1-8
400V 3-Phase*	6-kW	9	592	4.30	5.83	0.057	AQ-E2-3-6	AQ-E2D-3-6
	8.4-kW	13	592	4.30	5.83	0.057	AQ-E2-3-8	AQ-E2D-3-8
120V 1-Phase	1-kW	8.5	462	3.36	4.90	0.057	AQ-E2-1-1-120	AQ-E2D-1-1-120
	1.5-kW	12.5	462	3.36	4.90	0.057	AQ-E2-1-1.5-120	AQ-E2D-1-1.5-120
	2-kW	17	462	3.36	4.90	0.057	AQ-E2-1-2-120	AQ-E2D-1-2-120

* For voltages other than 400V please add: -380, -415 or -480 at the end of a product code e.g. AQ-E2-3-6-380. Weights stated above are for analogue models only. #Please add 0.26kg for digital models. For any other voltages or custom builds, please contact our sales team sales@elecro.co.uk

ACCESSORIES (Included)

Universal union
for rigid piping



Hose tail for flexible piping



CONTROLLER

POOLSMART PLUS

A highly convenient, remotely accessible, touchscreen heat controller for residential and commercial pools. Includes a flow switch and temperature sensor for accurate monitoring and a management system that gives complete control over the swimming pool heating.

Number of
Models

1

Model Type

**Heating
only**

Ingress
Protection Rating

44

FEATURES

- Smart touchscreen display
- BMS (Building Management System) Integration Ready
- Multi-lingual interface
- Programmable 24-hour time clock (4 time zones)
- Flow switch and temperature sensor ports
- Accurate control to 0.5°C
- Diagnostic display



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/poolsmart

For system setup, see page 13

SIMPLIFY YOUR LIFE WITH THE ELECR0 APP

Connection via Wi-Fi, 4G and Cloud enables you to take full control of your swimming pool heating from anywhere in your home or office, with a simple app on your smartphone.



For connectivity, please refer to your device manual.



Compatible with:



All Nano Models



Flowline 2



Evolution 2



Optima Compact



SFS Joey



Titan Optima

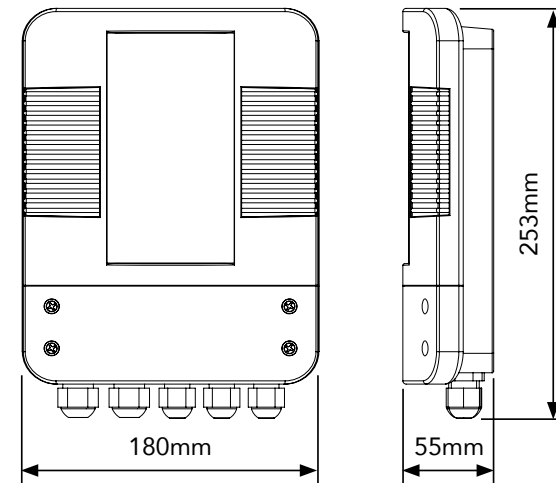
SPECIFICATIONS

Power supply:	100~240V Single phase
Model type:	Heating only
Control thermostat:	Digital: 0 > 45°C (0.5°C differential)
Temperature sensor:	3 metre long (thermistor 103AT-2, R25=10K B=3435K)
Flow switch:	3 metre long with Rhodium tipped reed switch with titanium fulcrum pin
IP rating	IP44
Frequency:	50/60 Hz
Mounting:	Wall mounting

KEY FEATURES



DIMENSIONS



ACCESSORIES (Included)



3 metre Flow Switch



3 metre Temperature Sensor



T-Piece



50mm & 1.5" Reducers



MODEL

MODEL	DESCRIPTION	POWER OUTPUT	ACCESSORIES (INCLUDED)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m ³)	PRODUCT CODE
Controller	Pool heating controller	Volt free heating output and volt free filtration pump output	3m long flow switch, 3m long temperature sensor, T-piece and 50mm & 1.5" Reducers	0.820	1.450	0.020	PSPC-POOL

Heat Exchangers

by Elecro Engineering

Heat exchangers provide an efficient way to transfer energy from an existing boiler, heat pump, or renewable source into the pool, offering high-capacity heating with low operational costs. They're ideal for all domestic and commercial pools that require a robust and responsive heating solution. For pool users, this means consistent water temperature and fast recovery, even in cooler months.

For installers, heat exchangers offer flexibility across a wide range of system configurations. They can be integrated into central heating setups or renewable systems such as biomass or air source heat pumps, helping clients save energy and reduce heating costs. Durable, high-performance, and easy to service, heat exchangers are a smart addition to any professional pool installation.

A large swimming pool at night with lounge chairs, a house in the background, and a quote overlay.

“...heat your pool
while heating
your home.”

OUR HEAT EXCHANGERS AND CONTROLLERS AT A GLANCE

Heat Exchanger	For Pool Type						No. of Models	Standard Power Output (kW)	Primary Circuit (Hot Water)	Secondary Circuit (Pool Water)	Max. Bar Primary Circuit	Max. Bar Secondary Circuit	Sea & Salt Chlorinated Water Safe	Wall & Floor Mountable
	Spa	Residential	Commercial	Aquatics	High Pressure	Industrial								
G2	●	●		●			4	30-122	Stainless Steel	Titanium	4	4	●	●
G2C NEW!			●			●	4	170-320	Titanium	Titanium	4	4	●	●
SST	●	●		●	●		4	36-95	Titanium	Polymer	30	3	●	●
Escalade	●	●		●	●	●	3	30-75	Titanium	Titanium	30	5	●	●
Plate			●		●	●	19	30-819	Titanium	Titanium	10	10	●	Floor Only

Controller	Heating	Cooling	Analogue	Touch Screen Programmable	Electric Heater/Heat Exchanger Compatibility										Flow Sensor Ports	Temp Sensor Ports	Multi-lingual Interface	Optional Grundfos Booster Pump
					All Nano Models	Flowline 2	Evo 2	Optima Compact	SFS Joey	Titan Optima	G2	SST	Escalade	Plate				
Analogue	●		●								●	●	●	●	●	●		●
Heatsmart Plus	●			●							●	●	●	●	●	●	●	●
Koolsmart Plus		●		●							●	●	●	●	●	●	●	●

SYSTEM SETUP

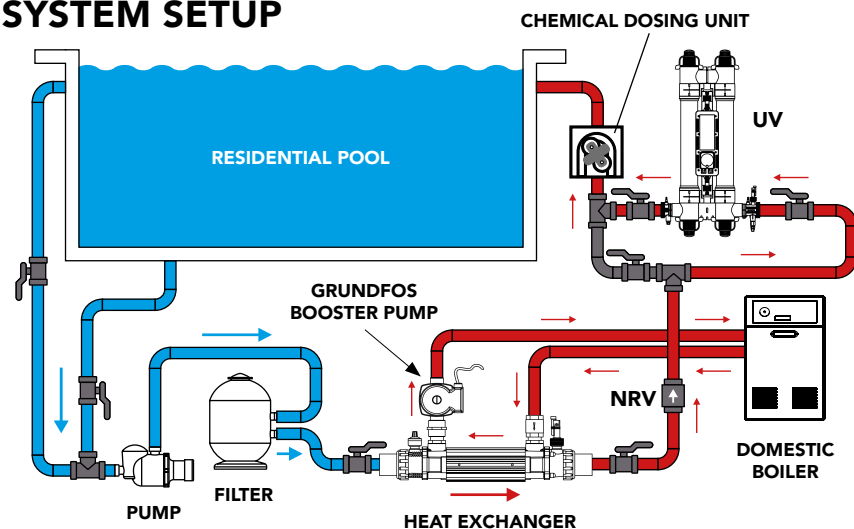


Fig 1. Positioning a residential heat exchanger

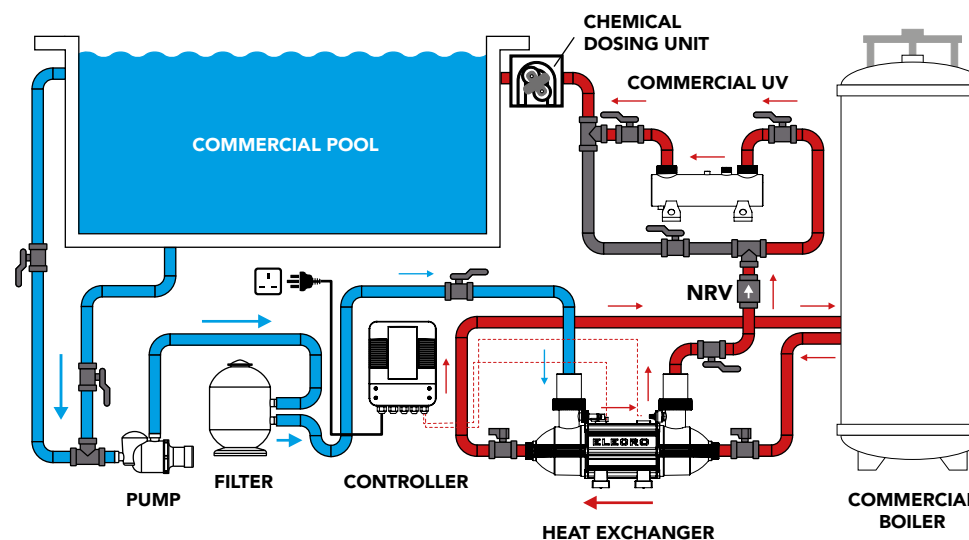


Fig 2. Positioning a semi-commercial heat exchanger

In residential and commercial pool systems, the primary circuit refers to the water flow to and from the boiler, while the secondary circuit is the water circulating to and from the swimming pool. The heat exchanger should be positioned after the pump and filter, but before the UV system. This ensures clean water enters the heat exchanger, protecting it from debris and improving heat transfer efficiency. Placing it before the UV system also allows the water to be heated prior to disinfection, which enhances the UV system's performance.

HEAT EXCHANGER

G2 MULTI-TUBULAR

Efficient, silent, and built to last, the G2 Multi-Tubular Heat Exchanger is Elecro's high-performance solution for spas and residential pools. Its unique multi-tube titanium bundle and stainless steel casing deliver exceptional heat transfer, corrosion resistance, and long-term reliability. Easy to install and requiring no electricity, the G2 operates silently and efficiently, making it the ideal low-investment choice for energy-conscious swimming pool heating.

Number of
Models

4

Power
Options

**30 to
122-kW**

Primary
Working Pressure

4 Bar
Maximum

Secondary
Working Pressure

4 Bar
Maximum

FEATURES

- Titanium tube bundle
- BS 316L Stainless Steel primary casing
- 4 bar pressure tolerance
- Low pressure drop
- Optional Analogue or Smart Touchscreen Controller and Booster Pump
- Temperature and flow sensor port
- Sea and salt chlorinated water compatible
- For heating or cooling
- Floor or wall mountable



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/g2

For system setup, see page 35

Suitable for:



Spas



Residential
Pools



Aquatics





SPECIFICATIONS

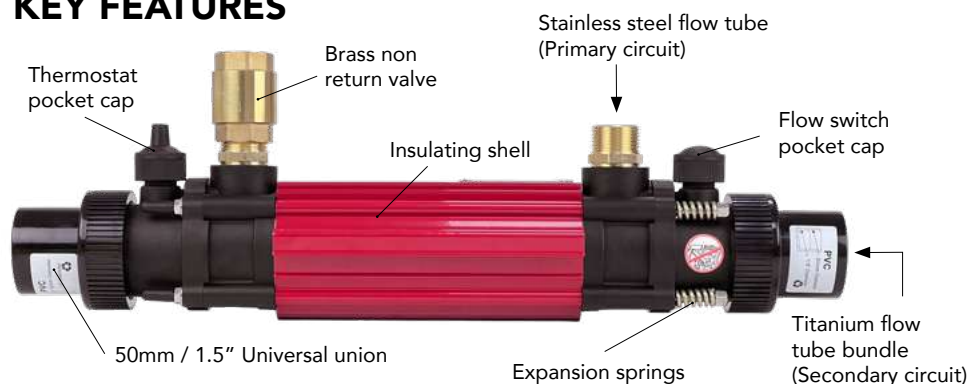
PRIMARY CIRCUIT (BOILER)

Flow tube: BS 316L stainless steel tube
Water connections: 1" BSP male fittings
Working pressure: 4 bar maximum

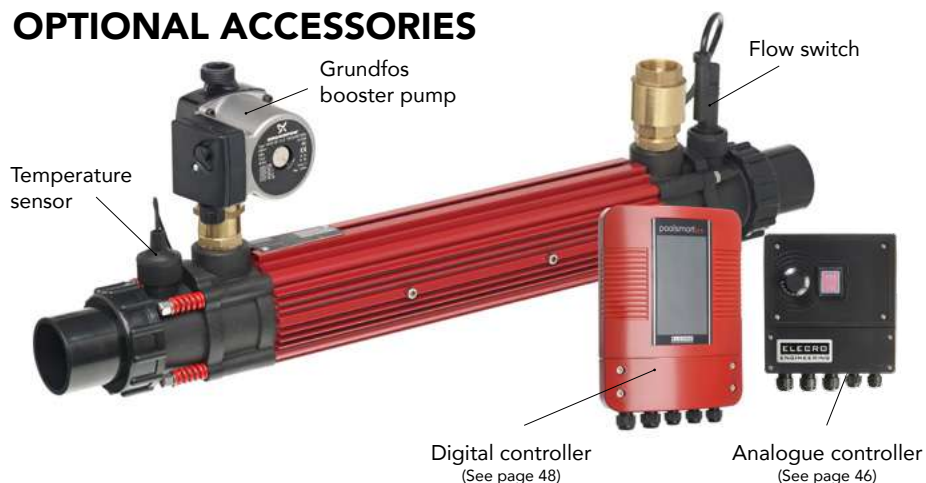
SECONDARY CIRCUIT (POOL)

Flow tube: Bundle of 37 titanium tubes
Water connections: 1½"/50mm stepped PVC unions for rigid pipe connection
Working pressure: 4 bar maximum

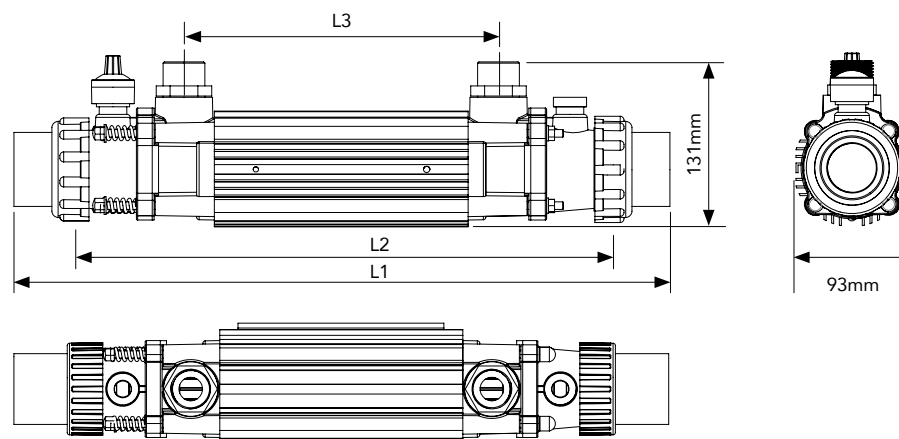
KEY FEATURES



OPTIONAL ACCESSORIES



DIMENSIONS



MODELS

STANDARD POWER OUTPUT	LENGTH L1 (mm)	LENGTH L2 (mm)	LENGTH L3 (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE
30-kW (102k BTU)	540	426	247	3.371	3.996	0.017	G2-HE-30T
49-kW (167k BTU)	710	596	417	4.530	5.260	0.023	G2-HE-49T
85-kW (290k BTU)	840	726	547	5.390	6.125	0.028	G2-HE-85T
122-kW (416k BTU)	1000	886	707	6.560	7.500	0.034	G2-HE-122T

PERFORMANCE

STANDARD POWER OUTPUT	PRIMARY FLOW (m³/h)	PRIMARY PRESSURE LOSS (Bar)	SECONDARY FLOW (m³/h)	SECONDARY PRESSURE LOSS (Bar)	ΔT 15°C kW	ΔT 20°C kW	ΔT 30°C kW	ΔT 40°C kW	ΔT 50°C kW	ΔT 60°C kW	ΔT 70°C kW
30-kW	1.1	0.061	10	0.051	9	11	16	20	26	30	33
30-kW	1.3	0.068	10	0.051	10	13	18	23	31	34	39
30-kW	1.3	0.068	14	0.187	11	15	20	26	34	41	46
49-kW	1.6	0.077	16	0.372	13	18	25	43	41	50	56
49-kW	1.8	0.083	16	0.372	15	20	28	38	45	55	62
49-kW	2.2	0.093	17	0.426	16	22	33	44	52	64	73
85-kW	2.4	0.113	17	0.526	22	28	40	53	64	75	81
85-kW	2.7	0.129	17	0.526	26	32	46	60	73	82	89
85-kW	3.2	0.147	17	0.526	28	34	49	64	77	90	102
122-kW	3.8	0.183	19	0.734	33	43	68	75	93	108	120
122-kW	4.2	0.200	19	0.734	36	48	70	89	108	126	143
122-kW	4.6	0.211	19	0.734	38	53	73	95	116	137	156

SEMI-COMMERCIAL HEAT EXCHANGER

G2C MULTI-TUBULAR

Designed for large-volume pools and semi-commercial use, the G2C delivers high-efficiency heat transfer while significantly lowering energy consumption and CO₂ emissions. Its advanced, durable design supports a wide range of heating and cooling systems, including central boilers, heat pumps, chillers, and thermal solar panels, helping reduce operational costs and improve long-term sustainability.

Number of Models

4

Power Output

170 to 320-kW

Primary Working Pressure

4 Bar
Maximum

Secondary Working Pressure

4 Bar
Maximum

FEATURES

- Optimised design using Computational Fluid Dynamics (CFD) analysis
- Grade 1 Titanium tube bundle for maximum corrosion resistance and anti-fouling, thus reducing maintenance and operation cost
- Twisted tube design promotes turbulence on both shell and tube sides, improving heat transfer coefficients compared to traditional straight tubes
- Suitable for seawater and marine applications
- Up to 4 bar pressure tolerance
- Reduced operation pressure drops at high flow rates
- Compact design with greater heat transfer for the same footprint
- Temperature and flow sensor ports
- Optional integration of controller
- Suitable for cooling applications with a water-glycol mixture
- Floor or wall mountable



For the data sheet and spare parts list, scan this QR code, or visit [elecro.co.uk/product/g2c](https://www.elecro.co.uk/product/g2c)

For system setup, see page 35

Suitable for:



Commercial Pools



SPECIFICATIONS

PRIMARY CIRCUIT (BOILER)

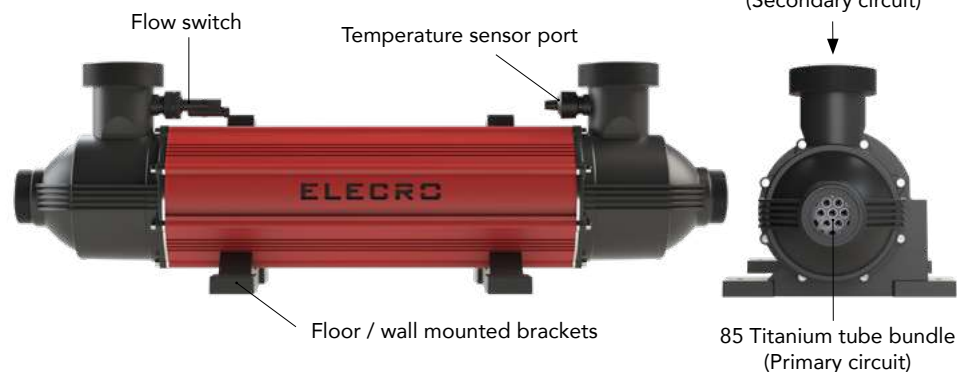
- Flow tube:** Bundle of 85 twisted titanium tubes
Water connections: 1.5" BSP male fittings
Working pressure: 4 bar maximum

SECONDARY CIRCUIT (POOL)

- Flow tube:** Titanium
Water connections: 2½"/75mm PVC unions for rigid pipe connection
Working pressure: 4 bar maximum



KEY FEATURES



OPTIONAL ACCESSORIES



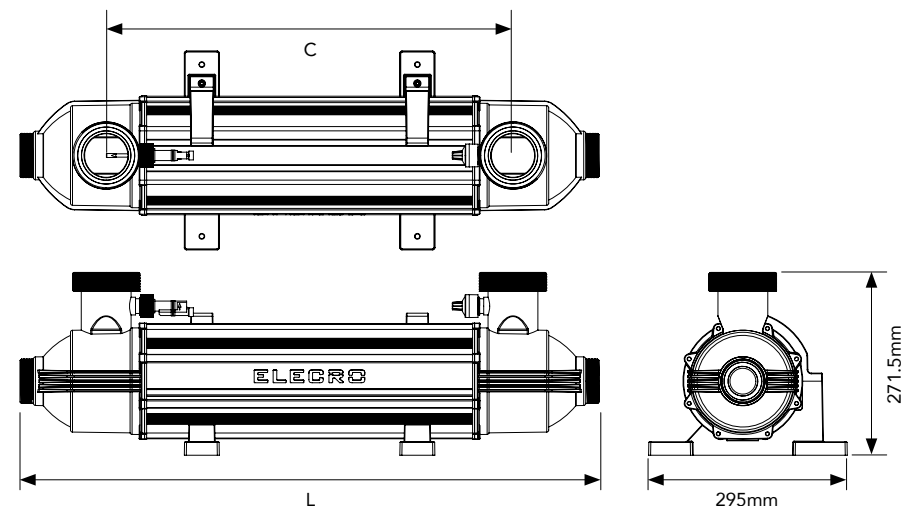
Analogue Controller
(See page 46)



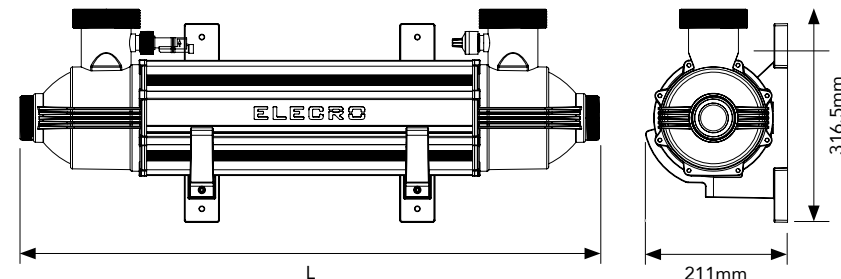
Digital Controller
(See page 48)

DIMENSIONS

FLOOR MOUNTED



WALL MOUNTED



MODELS

MODEL	LENGTH L (mm)	LENGTH C (mm)	PRIMARY		SECONDARY		ΔT 15°C (kW)	ΔT 30°C (kW)	ΔT 65°C (kW)
			FLOW (m³/h)	PRESSURE LOSS (kPa)	FLOW (m³/h)	PRESSURE LOSS (kPa)			
G2C-HE-170T	560	304	10	12	28	20	32	69	170
G2C-HE-220T	710	454	10	16	28	26	42	91	220
G2C-HE-270T	860	604	10	20	28	30	56	117	270
G2C-HE-320T	1010	754	10	23	28	32	65	136	320

HEAT EXCHANGER

SST

Durable, silent, and built for demanding environments, the SST Shell & Spiral Tube Heat Exchanger is Elecro's high-performance solution for spas and residential pools. Featuring a coiled titanium tube housed in a specially formulated polymer shell, it offers exceptional heat transfer, corrosion resistance, and pressure tolerance. With no electrical consumption and zero maintenance, the SST delivers efficient, silent heating, making it the ideal low-investment choice for long-term comfort.

Number of
Models

4

Power
Output

**36 to
95-kW**

Primary
Working Pressure

30 Bar
Maximum

Secondary
Working Pressure

3 Bar
Maximum

FEATURES

- Special formulated polymer casing
- Coiled grade 1 titanium primary circuit
- 30 bar (primary) and 3 bar (secondary) pressure tolerance
- Low pressure drop
- Optional Analogue or Smart Touchscreen Controller and Booster Pump
- Temperature and flow sensor port
- Sea and salt chlorinated water compatible
- For heating or cooling
- Floor or wall mountable



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/sst

For system setup, see page 35

Suitable for:



Spas



Residential
Pools



Aquatics



SPECIFICATIONS

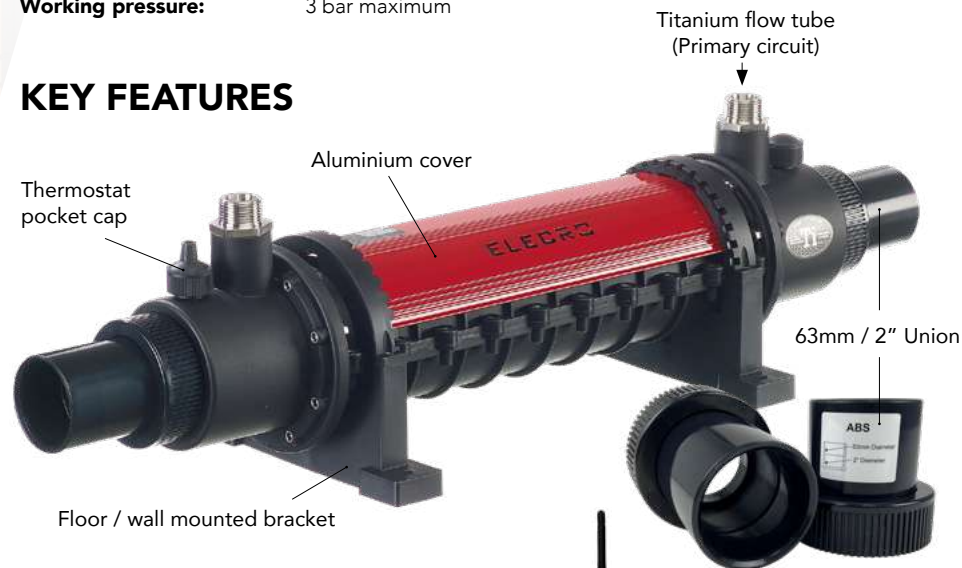
PRIMARY CIRCUIT (BOILER)

Flow tube:	Coiled grade 1 titanium
Water connections:	1" BSP male fittings
Working pressure:	30 bar maximum

SECONDARY CIRCUIT (POOL)

Flow tube:	Special formulated polymer
Water connections:	2"/63mm stepped ABS unions for rigid pipe connection with 1½"/50mm reducers
Working pressure:	3 bar maximum

KEY FEATURES



OPTIONAL ACCESSORIES



Grundfos Booster Pump

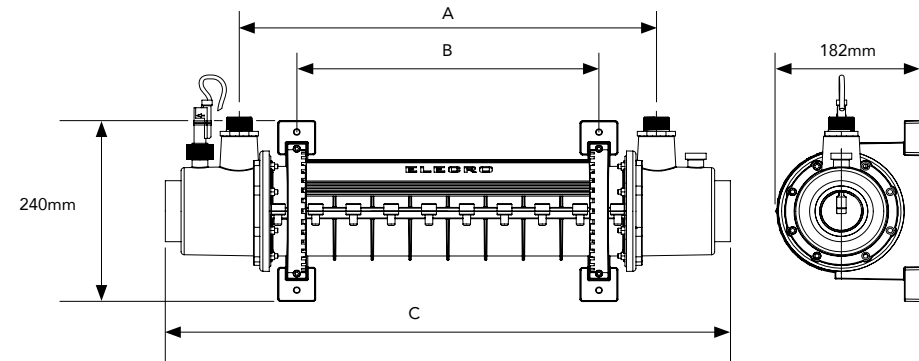


Digital Controller
(See page 48)



Analogue Controller
(See page 46)

DIMENSIONS



MODELS

STANDARD POWER OUTPUT	LENGTH A (mm)	LENGTH B (mm)	LENGTH C (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE
36-kW (123k BTU)	290	143	478	5.250	6.250	0.049	SST-36
50-kW (171k BTU)	386	240	574	5.750	6.750	0.049	SST-50
75-kW (256k BTU)	530	384	718	6.530	7.830	0.069	SST-75
95-kW (324k BTU)	674	528	862	7.430	8.930	0.069	SST-95

PERFORMANCE

STANDARD POWER OUTPUT	PRIMARY FLOW (m³/h)	PRIMARY PRESSURE LOSS (Bar)	SECONDARY FLOW (m³/h)	SECONDARY PRESSURE LOSS (Bar)	ΔT 50°C kW	ΔT 60°C kW	ΔT 70°C kW
36-kW	1.1	0.04	12	0.016	29	36	41
50-kW	2.5	0.08	15	0.035	42	50	57
75-kW	2.7	0.12	18	0.070	51	64	75
95-kW	3.2	0.18	18	0.099	67	81	95



HEAT EXCHANGER

ESCALADE

Robust, silent, and built for high-pressure performance, the Escalade is Elecra's top-tier spiral tube heat exchanger for spas, pools, and industrial systems. Featuring a fully welded titanium coil housed in a pressure-tolerant shell, it delivers exceptional heat transfer and corrosion resistance. Easy to install and requiring no electricity, the Escalade operates silently and efficiently resulting in the ideal solution for demanding swimming pool and spa environments.

Number of
Models

3

Power
Output

**30 to
75-kW**

Primary
Working Pressure

30 Bar
Maximum

Secondary
Working Pressure

5 Bar
Maximum

FEATURES

- High efficiency, titanium spiral coil, fully immersed in the secondary chamber
- 30 bar (primary) and 5 bar (secondary) pressure tolerance
- Low pressure drop
- Optional Analogue or Smart Touchscreen Controller and Booster Pump
- Temperature port
- Sea and salt chlorinated water compatible
- For heating or cooling
- Floor or wall mountable



For the data sheet and spare parts list, scan this QR code, or visit elecra.co.uk/product/escalade

For system setup, see page 35

Suitable for:



Spas



Residential
Pools



Aquatics



SPECIFICATIONS

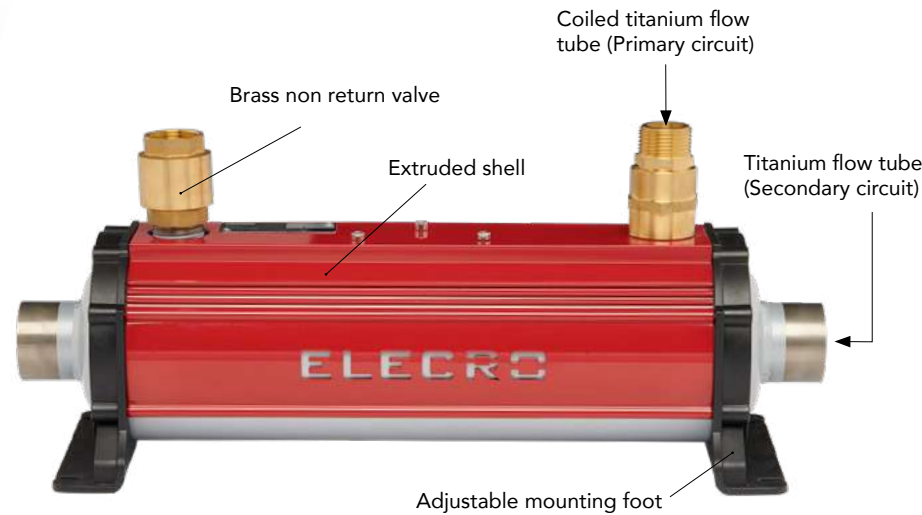
PRIMARY CIRCUIT

Flow tube: Coiled grade 1 titanium
Water connections: 1" BSP male fittings
Working pressure: 30 bar maximum

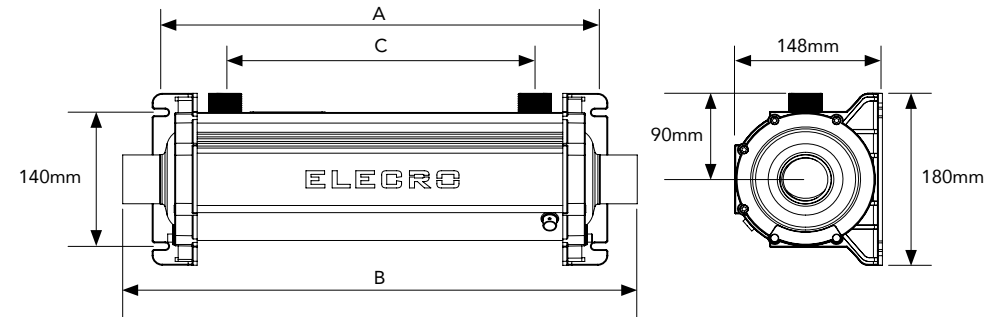
SECONDARY CIRCUIT

Flow tube: Grade 1 titanium
Water connections: 1½" BSP female fittings
Working pressure: 5 bar maximum

KEY FEATURES



DIMENSIONS



MODELS

STANDARD POWER OUTPUT	LENGTH A (mm)	LENGTH B (mm)	LENGTH C (mm)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE
30-kW (102k BTU)	382	476	262	2.700	3.700	0.049	WHE-30
40-kW (136k BTU)	430	515	310	3.100	4.100	0.049	WHE-40
75-kW (256k BTU)	674	759	554	5.010	6.100	0.069	WHE-75

PERFORMANCE

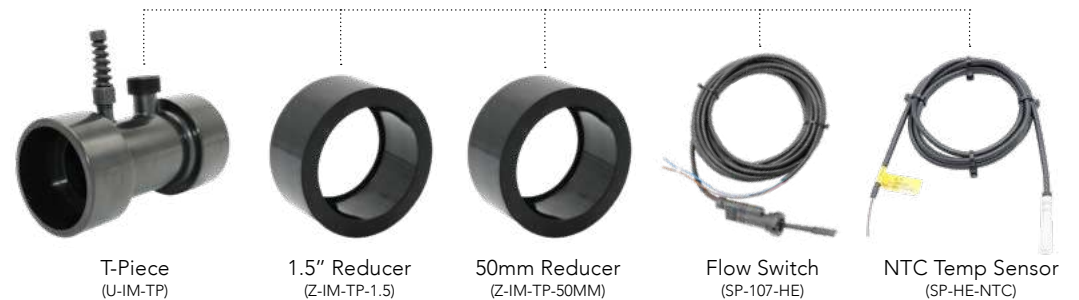
STANDARD POWER OUTPUT	PRIMARY FLOW (m³/h)	PRIMARY PRESSURE LOSS (Bar)	SECONDARY FLOW (m³/h)	SECONDARY PRESSURE LOSS (Bar)	ΔT 50°C kW	ΔT 60°C kW	ΔT 70°C kW
30-kW	1.1	0.061	12	0.05	26	30	34
40-kW	2.4	0.068	15	0.05	34	37	40
75-kW	3.0	0.068	18	0.07	54	64	75

OPTIONAL ACCESSORIES



T-PIECE COMPLETE ACCESSORY KIT

(Use code FS-T-DIG for Digital Controller. Use code FT-T-ANA for Analogue Controller)



HEAT EXCHANGER PLATE

Powerful, efficient, and built for scale, the Plate Heat Exchanger is Elecra's high-capacity solution for heating or cooling commercial pools. Its compact, modular design maximises heat transfer while minimising energy use, helping to reduce costs and environmental impact. With no electrical consumption, silent operation, and a wide range of models up to 819-kW, it's the ideal choice for large-scale water heating applications.

Number of Models

20

Power Output

20 to 819-kW

Pressure

10 Bar

Test Pressure

14.3 Bar

FEATURES

- High overall heat transfer coefficient
- Compact design gives maximum surface area to material volume without compromising mechanical robustness
- High performance with low hold-up volume
- Versatile, modular design
- Plate and gasket materials available to suit most fluid types
- Easy dismantling for rapid cleaning
- Short lead-time custom build service
- Other sizes available on request



For the data sheet and spare parts list, scan this QR code, or visit elecra.co.uk/product/plate

For system setup, see page 35

For accessories and T-piece kits, see page 43



PERFORMANCE

MODEL	PRIMARY FLOW (m³/h)	PRIMARY PRESSURE LOSS* (Bar)	SECONDARY FLOW (m³/h)	SECONDARY PRESSURE LOSS* (Bar)	MAX DUTY ΔT				MIN DUTY ΔT
					15°C** (kW)	30°C** (kW)	50°C** (kW)	70°C** (kW)	
PHE20-TI	0.89	0.12	1.15	0.23	9	18	30	36	20
PHE30-TI	1.3	0.12	1.7	0.23	12	25	43	61	30
PHE50-TI	2.2	0.18	2.9	0.35	20	41	71	101	50
PHE80-TI	3.5	0.20	4.6	0.40	33	67	114	162	80
PHE100-TI	4.5	0.24	5.9	0.47	41	84	144	205	102
PHE140-TI	6.2	0.27	8.1	0.53	56	115	196	280	140
PHE180-TI	7.9	0.26	10.3	0.51	73	149	254	363	178
PHE240-TI	10.7	0.27	13.9	0.51	100	205	350	499	242
PHE290-TI	12.7	0.28	16.5	0.54	118	240	410	585	287
PHE330-TI	14.7	0.27	19.1	0.51	140	285	486	693	332
PHE370-TI	16.4	0.29	21.3	0.54	155	316	539	768	370
PHE410-TI	18.3	0.31	23.9	0.58	172	350	598	852	414
PHE450-TI	19.7	0.23	25.7	0.50	139	284	486	695	446
PHE500-TI	22.3	0.21	29.0	0.46	166	340	581	830	504
PHE550-TI	24.2	0.22	31.5	0.46	181	370	631	902	546
PHE610-TI	27.0	0.23	35.1	0.48	200	409	699	998	609
PHE670-TI	29.8	0.23	38.7	0.49	223	457	781	1115	672
PHE730-TI	32.5	0.23	42.4	0.48	242	496	847	1210	735
PHE780-TI	34.4	0.23	44.8	0.48	257	525	897	1282	777
PHE820-TI	36.3	0.24	47.2	0.49	271	555	947	1354	819

*=calculations made with nominal flow values. **ΔT is the temperature difference between the primary inlet temperature and the secondary inlet temperature. The Duty represents the maximum duty of the heat exchanger based on nominal flow rate values and average oversurfacing of 1%. ***ΔT is the temperature difference between the primary inlet temperature and the secondary inlet temperature. The Duty represents the minimum duty of the heat exchanger based on a 20°C temperature difference on the primary side, a 15°C temperature difference on the secondary side, and an average oversurfacing of 120%. #The Weight (Full) is calculated at a water density of 998 kg/m³ and room temperature of 20°C.

SPECIFICATIONS

PLATE THICKNESS (mm)	WEIGHT (EMPTY) (kg)	WEIGHT (FULL)# (kg)	NO. OF PLATES	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	S (mm)
0.5	23.88	24.29	5	204	86	490	381	116	13.25	DN 32	0	14/12
0.5	23.65	24.26	7	204	86	490	381	91	18.55	DN 32	0	14/12
0.5	24.04	24.85	9	204	86	490	381	91	23.85	DN 32	0	14/12
0.5	24.82	26.04	13	204	86	490	381	91	34.45	DN 32	0	14/12
0.5	29.00	31.00	15	204	86	490	381	116	39.75	DN 32	0	14/12
0.5	30.00	32.00	19	204	86	490	381	116	50.35	DN 32	0	14/12
0.5	32.00	34.00	25	204	86	490	381	141	66.25	DN 32	0	14/12
0.5	35.00	37.00	35	204	86	490	381	191	92.75	DN 32	0	14/12
0.5	36.00	38.00	39	204	86	490	381	191	103.35	DN 32	0	14/12
0.5	39.00	41.00	49	204	86	490	381	241	129.85	DN 32	0	14/12
0.5	40.00	42.00	53	204	86	490	381	291	140.45	DN 32	0	14/12
0.5	41.00	43.00	57	204	86	490	381	291	151.05	DN 32	0	14/12
0.6	150.00	154.00	19	312	140	963	690	447	66.5	DN 65	185	20/20
0.6	155.00	159.00	25	312	140	963	690	447	87.5	DN 65	185	20/20
0.6	156.00	160.00	27	312	140	963	690	447	94.5	DN 65	185	20/20
0.6	158.00	162.00	29	312	140	963	690	447	101.5	DN 65	185	20/20
0.6	161.00	165.00	33	312	140	963	690	447	115.5	DN 65	185	20/20
0.6	163.00	167.00	35	312	140	963	690	447	122.5	DN 65	185	20/20
0.6	164.00	168.00	37	312	140	963	690	447	129.5	DN 65	185	20/20
0.6	166.00	170.00	39	312	140	963	690	447	136.5	DN 65	185	20/20

(Width)
(Connection Interaxis)
(Height)
(Connection Interaxis)
(Length for std PN)
(Tightening)
(Connection size)
(Height connection)
(Frame plates THK)

MATERIALS

Frame:	P 335 NH
Plates:	Titanium
Gaskets:	EPDM Max 150°C
Hot Side Connections:	Stainless Steel
Cold Side Connections:	Stainless Steel
Bolts N.8 M12:	A 193 B7

DESIGN DATA

Temperature:	-10/100°C
Pressure:	10 Bar
Test Pressure:	14.3 Bar



CONTROLLER

ANALOGUE HEAT CONTROLLER

Simple, safe, and energy-efficient, the Analogue Heat Controller is designed to manage heating in residential and commercial pools. Compatible with all Elecro heat exchangers, it offers precise temperature control up to 45°C and includes an ultra-reliable flow switch for added safety. Easy to install and upgradeable with a Grundfos booster pump, it's a cost-effective solution for dependable thermal management.

Number of
Models

1

Model Type

**Heating
only**

Ingress
Protection Rating

44

FEATURES

- Easy to install
- Range of controlled temperatures up to 45°C
- Accurate control to 1.2°C
- Auxiliary relay for booster circulation pump and heat output
- Sensor ports



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/analogue-heat-controller

For system setup, see page 35



Compatible with:



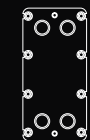
G2



SST



Escalade*



Plate*

*Requires optional accessories. See page 43.

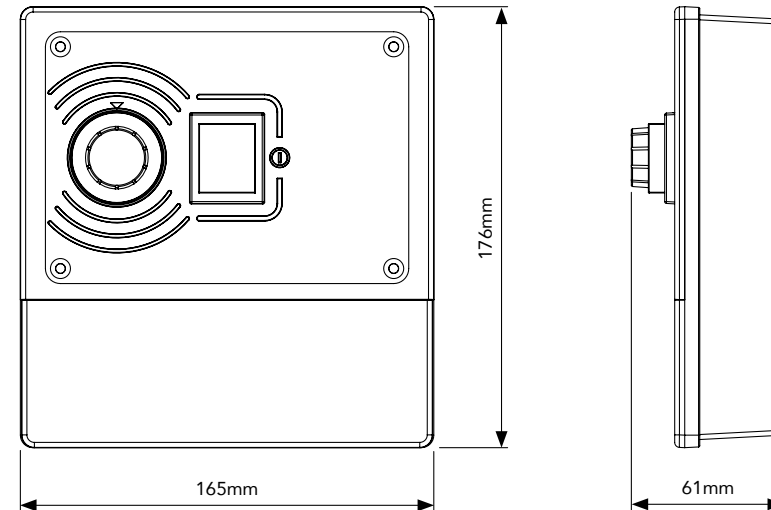
SPECIFICATIONS

Power supply:	Single phase
Model type:	Heating only
Control thermostat:	Analogue: 0 > 45°C (1.2°C differential)
Temperature sensor:	0.5 metre long capillary thermostat
Flow switch:	1 metre long with Rhodium tipped reed switch with titanium fulcrum pin
IP rating:	IP44
Frequency:	50/60 Hz
Mounting:	Wall mounting

KEY FEATURES



DIMENSIONS



ACCESSORIES (Included)



MODELS

MODEL	DESCRIPTION	POWER OUTPUT	ACCESSORIES (INCLUDED)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE
Controller	Analogue heat exchanger controller	Volt free heating output and 220~240V booster pump output	1m long flow switch and 0.5m capillary temperature sensor	0.890	1.400	0.016	G2-HE-ANA
	Analogue heat exchanger controller with Grundfos booster pump	Volt free heating output and 220~240V booster pump output	1m long flow switch, 0.5m capillary temperature sensor and 1" BSP female/female brass adapter	2.800	3.400	0.021	G2-HE-ANA-GP

CONTROLLER

HEATSMART PLUS & KOOLSMART PLUS

The perfect addition for all Elecro heat exchangers - A touchscreen heating or cooling controller with flow switch and temperature sensor for safe operation. Both controllers are available with or without a Grundfos booster pump.

Number of Models

2

Model Type

Heating/
Cooling

Ingress Protection Rating

44

FEATURES

- Smart touchscreen display
- BMS (Building Management System) Integration Ready
- Multi-lingual interface
- Programmable 24-hour time clock (4 time zones)
- Flow and temperature sensor ports
- Accurate control to 0.5°C
- Diagnostic display
- 1m long flow switch
- 1m long temperature sensor



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/heat-smart-kool-smart

For system setup, see page 35



Compatible with:



G2



SST



Escalade*



Plate*

*Requires additional accessories. See page 43.

SIMPLIFY YOUR LIFE WITH THE ELECR0 APP

Connection via Wi-Fi, 4G and Cloud enables you to take full control of your swimming pool heating from anywhere in your home or office, with a simple app on your smartphone.



For connectivity, please refer to your device manual.

www.elecro.co.uk

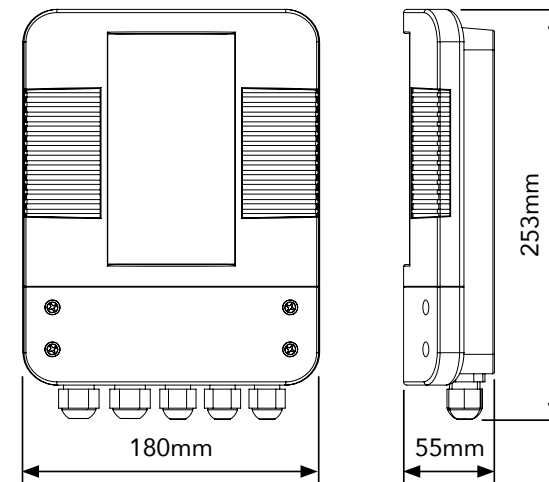
SPECIFICATIONS

Power Supply:	100~240V Single Phase
Model type:	Heating only and Cooling only
Control Thermostat:	Digital: 0 > 45°C (0.5 °C differential)
Temperature sensor:	1 metre long (thermistor 103AT-2, R25=10K, B=3435K)
Flow Switch:	1 metre long with Rhodium tipped reed switch with titanium fulcrum pin
IP Rating:	IP44
Frequency:	50/60 Hz
Mounting:	Wall mounting
Optional accessories:	Grundfos booster pump

KEY FEATURES



DIMENSIONS



ACCESSORIES (Included)



1 metre Flow Switch



1 metre Temperature Sensor



Grundfos Booster Pump (PSPC-HE-GP and KSPC-HE-GP only)

MODELS

MODEL	DESCRIPTION	POWER OUTPUT	ACCESSORIES (INCLUDED)	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE
Heatsmart Plus	Controller	Volt free heating output, volt free filtration pump output and 220~240V booster pump output	1m long flow switch and temperature sensor	0.820	1.450	0.009	PSPC-HE
	Controller with Grundfos booster pump	Volt free heating output, volt free filtration pump output and 220~240V booster pump output	1m long flow switch, 1m long temperature sensor & 1" BSP female/female brass adapter	2.580	3.400	0.017	PSPC-HE-GP
Koolsmart Plus	Controller	Volt free cooling output, volt free alarm* output and 220~240V booster pump output	1m long flow switch and temperature sensor	0.820	1.450	0.009	KSPC-HE
	Controller with Grundfos booster pump	Volt free cooling output, volt free alarm* output and 220~240V booster pump output	1m long flow switch, 1m long temperature sensor & 1" BSP female/female brass adapter	2.580	3.400	0.017	KSPC-HE-GP

*Alarm activated when in aquatic mode

ALL TITANIUM

Solar Heating

from Elecro Engineering

Solar pool heating is a sustainable, cost-effective way to extend the swimming season while dramatically reducing energy consumption. Using free energy from the sun, these systems gently raise and maintain pool temperature, enhancing comfort without the environmental impact of fossil fuels. For pool users, it means warmer water for longer - at virtually no running cost.

For installers, solar heating represents an eco-friendly upgrade that aligns with growing demand for green technologies. With no moving parts, low maintenance, and simple integration, solar systems offer long-term value and a strong selling point for environmentally conscious customers. It's a smart, sustainable investment for every pool.

A couple is seen from behind, standing on a pool deck. The man is wearing a light blue shirt and white shorts, and the woman is wearing a white dress and a large white hat. They are looking out over a swimming pool that stretches towards the horizon, with a coastal town and the sea visible in the background under a clear sky.

“...a smart investment
in clean, sustainable
pool heating.”

OUR SOLAR HEATERS AT A GLANCE

Model	For Pool Type					No. of Models	No. of tubes per model	Power Output (kW)	Plug Included	Minimum Operating Pressure (Bar)	System Flow Rate (m³/hr)	Touch Screen/ Programmable	Sea & Salt Chlorinated Water Safe	Wall & Floor Mountable
	Spa	Above-Ground	Residential	Commercial	Aquatics									
Thermecro	●	●	●			3	16, 32 & 48	Up to 4.5		0.4	3	●	●	●

SYSTEM SETUP

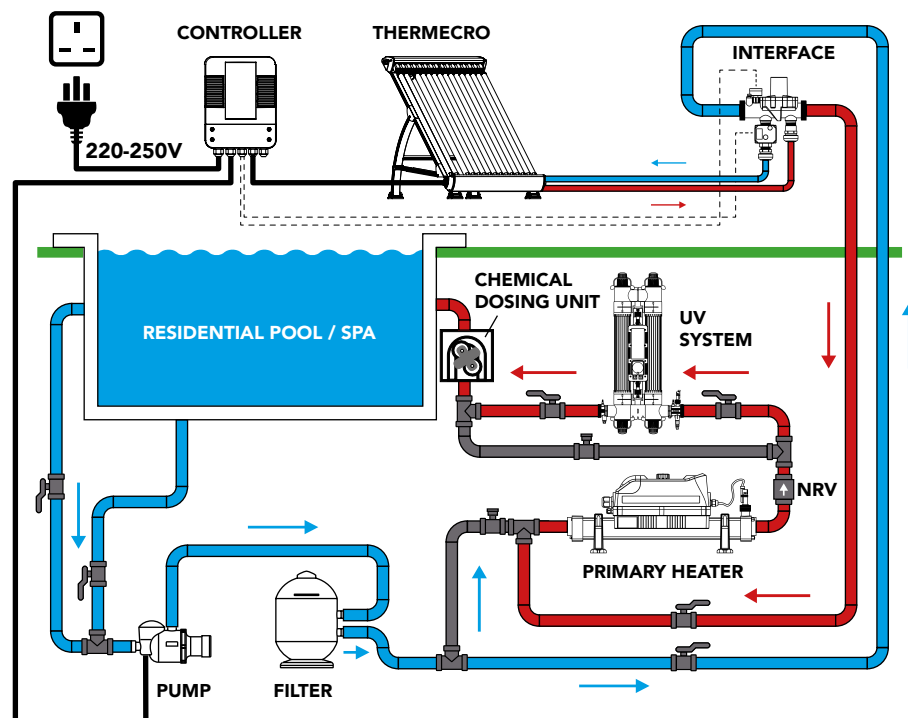
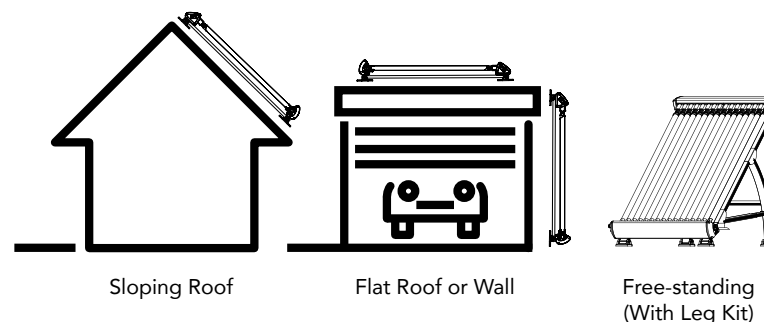


Fig 1. System setup for Solar, controller and interface

Positioning your Thermecro



The Thermecro solar heater must be installed after the pump and filter to ensure that only clean, debris-free water enters the system, protecting the solar tubes and maintaining performance. Water is directed through a pool interface valve, which diverts a portion of the flow to the solar panel. From there, it enters the inlet manifold at the base of the panel and is evenly distributed to all glass tubes. Heat from the hottest parts of the tubes is transferred via aluminium fins to a U-shaped titanium capillary tube, where the pool water circulates and absorbs the solar energy.

As with other heating systems, the UV unit should be positioned after the solar heater, allowing the water to be heated before disinfection. This improves the UV system's effectiveness and ensures optimal water quality.

Thermecro can be installed on a sloping or flat roof, a wall or free-standing with the optional leg kit.

SOLAR HEATING

THERMECRO

The Thermecro solar heater delivers exceptional performance by converting up to 92% of solar energy into usable heat, far beyond the efficiency of traditional systems. Designed to work in any climate, Thermecro doesn't rely on direct sunlight or high ambient temperatures, making it a reliable solution year-round. It's compact, insulated design ensures zero heat loss, while the evacuated glass tubes maximise thermal output. Ideal as a secondary heating system, Thermecro helps reduce energy costs and carbon footprint, offering a sustainable way to keep your pool or spa comfortably warm.

Number of
Models

3

Power
Output

**1.5kW -
4.5-kW**

Maximum Pool
Volume

**Up to*
30m³**

Ingress
Protection Rating

44

*Models are connectable for larger pool sizes

FEATURES

- Generates far more hot water per m² than any other solar heating system
- Works even in the lowest of ambient temperatures
- Compact design in comparison to all other solar heating systems
- System is perfectly insulated so delivers hot water to the pool or spa with zero losses
- Significantly reduces your energy consumption
- Eco-Friendly - Reduces your carbon footprint



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/thermecro

For system setup, see page 51



Suitable for:



Above-Ground
Pools



Spas



Residential
Pools



SPECIFICATIONS

Evacuated irradiance collector tubes: Borosilicate 3.3 (Pyrex) 1500mm x 58mm

Frame material: Anodised aluminium 3mm wall sections

Water connection: 1" BSP male thread (x2 Pairs)

Temperature sensor: Pool Interface: 1 metre long NTC; thermistor 103AT-2, R25=10K B=3435K
Evacuated tube: 1.5 metres long;
High temperature NTC; Thermistor G560

OPTIONAL ACCESSORIES: SOLAR CONTROLLER AND POOL INTERFACE VALVE*

Control power supply: 220-240V Single phase

IP rating: IP44

Frequency: 50/60 Hz

Mounting: Wall / roof mounting or free standing

KEY FEATURES



ACCESSORIES (Included)

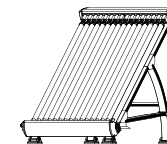
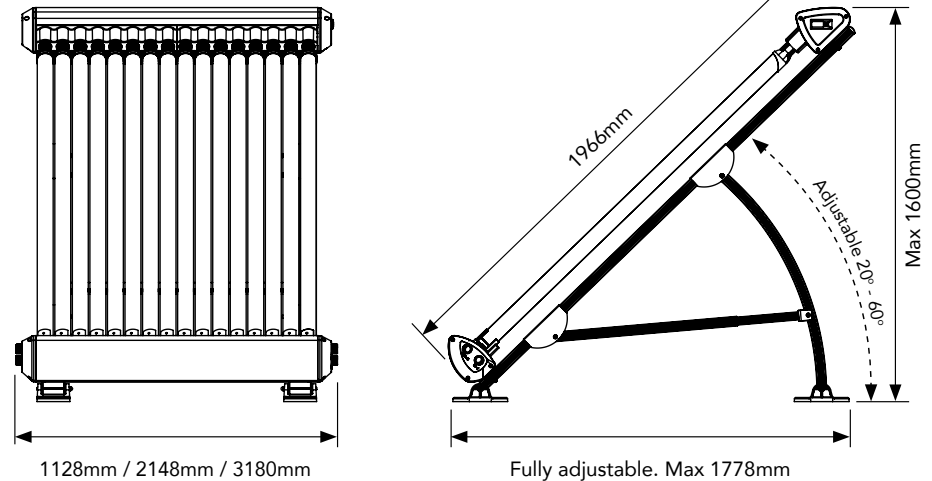


Pool filtration
pipework
Interface valve

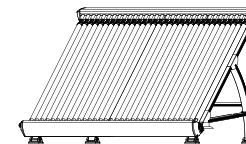


Digital solar
controller

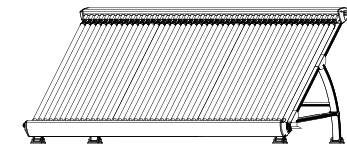
DIMENSIONS



16 Tube (1128mm)



32 Tube (2148mm)



48 Tube (3180mm)

MODELS

DESCRIPTION	MAX. POOL VOL (m³)	POWER OUTPUT (kW)	WIDTH (mm)	NET WEIGHT (kg)	WATER MASS (kg)	GROSS WEIGHT (kg)	VOL (m³)	PRODUCT CODE
16 Tube Array only	10	1.5	1128	47.00	+2.36	52.00	1.81	SR-AO-16
32 Tube Array only	20	3	2148	97.00	+4.72	108.00	2.43	SR-AO-32
48 Tube Array only	30	4.5	3180	137.00	+7.08	148.00	4.25	SR-AO-48
16 Tube Complete system	10	1.5	1128	70.00	+2.36	78.00	1.88	SRC-16
32 Tube Complete system	20	3	2148	124.00	+4.72	134.00	2.50	SRC-32
48 Tube Complete system	30	4.5	3180	160.00	+7.08	174.00	4.32	SRC-48

ACCESSORIES (Array only)

DESCRIPTION	NET WEIGHT (kg)	GROSS WEIGHT (kg)	VOLUME (m³)	PRODUCT CODE
Solar rig adjustment leg kit*	20.00	22.00	0.041	SR-ALK
Digital solar controller*	1.10	1.60	0.013	SR-DC
PEX pipe plumbing fittings	2.30	2.49	0.003	SR-PEX-FO
Pool filtration pipework interface valve*	1.80	2.32	0.013	SR-PIV

* Included in the complete system with codes SRC-16, SRC-32 and SRC-48

Smart, Patented Design - Thermacro Redefines Solar Pool Heating.

The most powerful source of heat in our solar system is the sun; if one third of the Sahara desert was covered by solar collectors it will exceed the entire world's energy requirement. Thermacro converts a staggering 92% of solar irradiance that strikes it into hot water for your swimming pool or spa. Thermacro is not reliant on outside temperatures or direct sunlight so, unlike any other solar heaters on the market, it will work optimally in all weather conditions, temperatures and locations.


Key benefits

- Significantly reduces energy consumption
- The most efficient solar harvesting device known to mankind
- Achieves significantly higher temperatures than any other solar collectors
- Works by collecting solar irradiance, not just direct sunlight
- Eco-Friendly, reducing carbon footprint
- Stores hot water with virtually zero heat loss

Thermacro, with its own patented technology, is far superior to conventional systems, collecting 92% of solar irradiance in evacuated tubes. Similar to a vacuum flask, Thermacro ensures that all of the heat collected, is delivered to the pool or spa without any loss.

Conventional solar systems for pools will absorb solar irradiance, but will also lose a significant amount of heat especially when air temperatures are low. Whilst these systems cannot be sufficiently insulated from climatic conditions, Thermacro is perfectly insulated to retain that heat.

Thermacro is designed for easy installation into any pool or spa system. The tube array is arranged tightly together and mounted within an adjustable frame to achieve maximum energy yield, within the smallest possible footprint.



“...reducing your energy costs and carbon footprint.”

With energy prices continually rising, and the onus on us as individuals to conserve our planet's resources, now is the time to consider how Thermecro can reduce energy bills and help to preserve our environment.

Product overview

- **Revolutionary:** Evacuated tube technology has the highest efficiency for harvesting solar irradiance from any angle, not just direct sunlight. The system boasts the highest heat retention rate possible as the evacuated tubes do not allow heat to escape.
- **Eco-Friendly Solution:** Thermecro uses solar irradiance to heat any pool /spa system whilst emitting zero CO2 emissions.
- **Efficient:** The solar rack harvests solar irradiance in all weather conditions. The tubes convert the solar irradiance whether it is diffused, reflected or direct.
- **Space-Saving:** Thermecro is optimally designed to achieve the maximum output from the smallest possible footprint.
- **Reliable:** Thermecro is built to last, constructed from materials such as titanium, glass and polymer alloys. It can be coupled to any system, including sea and salt chlorinated water applications.
- **Cost-effective:** Thermecro uses no external power to generate hot water, so offers financial savings from the first day of installation.
- **Easy Installation:** Using the supplied installation kit, Thermecro can simply be plumbed into any existing pool or spa filtration circuit. No auxiliary pump or heat exchanger required.

How does it work?

Thermecro has uniquely adapted evacuated tube technology rendering it the most efficient solar heater available. Thermecro tubes will collect solar irradiance and turn this into hot water no matter what the ambient temperature. The tubes, frame and manifold system are designed specifically for use with pools and spas and offer a long life, even in a hostile environment. Thermecro is suitable for all pool types including sea and salt chlorinated water installations. The tubes have three key components:

1

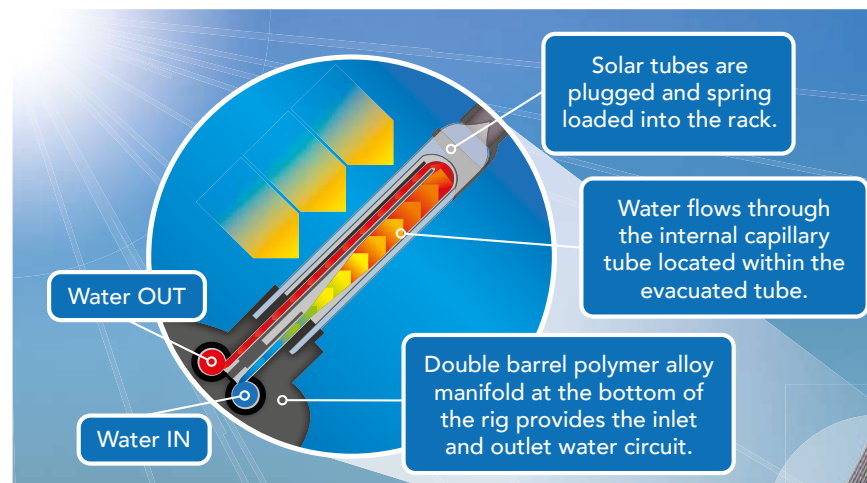
The tubes are made from very strong, low reflectivity, borosilicate glass. A key feature is that each tube has its own vacuum with a barium getter (vacuum indicator) incorporated, and this increases performance with a visual indicator of the tubes integrity. The vacuum tube insulates the heated water from the ambient air temperature and allows the system to deliver all of the hot water generated to the pool or spa throughout the year.

2

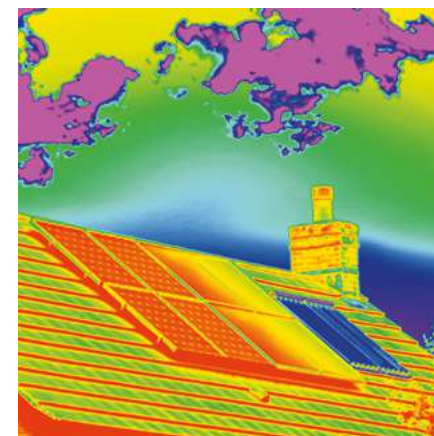
A special coating within the tube generates hot water from solar irradiance absorbed during daylight hours and even produces high efficiency in overcast conditions, unlike capillary matting or flat plate collectors. This heat is transferred to the water in the central cavity of the tubes.

3

Each Thermecro tube contains a titanium capillary to draw hot water from the hottest part of the solar tube, through the supply and return manifold, into the pool or spa.



In the images (below) we show three types of solar collectors on a typical roof installation: (1) Photovoltaic, (2) flat plate collectors and (3) evacuated tubes. In the thermal image, photovoltaic and flat plate collectors are glowing yellow and red, thus showing they are losing heat, whilst the evacuated tubes are blue showing that no heat is being lost.




Water Disinfection

by Electro Engineering

As the demand for cleaner, safer, and more sustainable swimming experiences grows, UV and AOP (Advanced Oxidation Process) pool sterilisation systems are rapidly becoming essential components of modern pool design. These systems provide powerful disinfection without relying solely on chlorine, reducing chemical usage by up to 80% while eliminating harmful pathogens, including chlorine-resistant microorganisms. For pool users, this means crystal-clear water that's gentler on the skin, eyes, and lungs, with no harsh chemical smells or irritation.

For pool installers, offering UV and AOP technology is an opportunity to future-proof installations with high-performance, low-maintenance systems that add value to every project. By incorporating our cutting-edge sterilisation units into your pools, you're not only enhancing water quality but also delivering a premium, health-focused feature that increasingly discerning customers are looking for. It's a simple upgrade with powerful long-term benefits, and a compelling differentiator in a competitive market.



“...peace of mind,
installed into
every pool.”

OUR DISINFECTION SYSTEMS AT A GLANCE

H.R. UV-C

Oxidation Method:
UV-C

Reaction Chamber:
EPTFE

Strength:
Powerful

Chemical Reduction:
Up to 60%

NEUTRALISES
all micro-organisms
including:



Model	For Pool Type				Dosing Pump	Analogue Lamp Life Indicator	Digital Lamp Life Indicator	Flow Switch	Lamp Type	Lamp Life (hours)	Plug Included	Max. Pool Size (m³)	Sea & Salt Chlorinated Water Safe	Vertical/ Horizontal Mountable
	Spa	Above-Ground	Residential	Aquatics										
Mini Standard		●	●	●					UV-C	Up to 9,000		30	●	●
Mini Classic		●	●	●		●		●	UV-C	Up to 9,000	●	30	●	●
Mini Pro		●	●		●		●	●	UV-C	Up to 9,000	●	30	●	●
Single Standard			●	●					UV-C	Up to 9,000		55	●	●
Single Classic			●	●		●		●	UV-C	Up to 9,000	●	55	●	●
Single Pro			●		●		●	●	UV-C	Up to 9,000	●	55	●	●
Double Standard			●	●					UV-C	Up to 9,000		110	●	●
Double Classic			●	●		●		●	UV-C	Up to 9,000	●	110	●	●
Double Pro			●		●		●	●	UV-C	Up to 9,000	●	110	●	●
Spa Standard	●								Amalgam UV-C	Up to 14,000		30	●	●
Spa Classic	●					●		●	Amalgam UV-C	Up to 14,000	●	30	●	●
Spa Pro	●				●		●	●	Amalgam UV-C	Up to 14,000	●	30	●	●

QUANTUM

Oxidation Method:
AOP (•OH+PCO)

Reaction Chamber:
Nano Crystal Technology

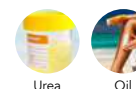
Strength:
Super Powerful

Chemical Reduction:
Up to 80%

DESTROYS
all micro-organisms
including:



ELIMINATES
contaminates
including:



Model	For Pool Type				Dosing Pump	Analogue Lamp Life Indicator	Digital Lamp Life Indicator	Flow Switch	Lamp Type	Lamp Life (hours)	Plug Included	Max. Pool Size (m³)	Sea & Salt Chlorinated Water Safe	Vertical/ Horizontal Mountable
	Spa	Above-Ground	Residential	Aquatics										
Mini Classic		●	●	●		●		●	UV-C	Up to 9,000	●	35	●	●
Mini Pro		●	●		●		●	●	UV-C	Up to 9,000	●	35	●	●
Single Classic			●	●		●		●	UV-C	Up to 9,000	●	65	●	●
Single Pro			●		●		●	●	UV-C	Up to 9,000	●	65	●	●
Double Classic			●	●		●		●	UV-C	Up to 9,000	●	130	●	●
Double Pro			●		●		●	●	UV-C	Up to 9,000	●	130	●	●
Spa Classic	●					●		●	Amalgam UV-C	Up to 14,000	●	35	●	●
Spa Pro	●				●		●	●	Amalgam UV-C	Up to 14,000	●	35	●	●

FOR COMMERCIAL POOL DISINFECTION, SEE OUR NEW SPECTRUM UV - Details on page 68 - 69



UV-C POOL STERILISER

H.R. UV-C

The HR UV-C sets a new benchmark in water sterilisation, delivering the highest UV reflectivity on the market to amplify exposure to harmful micro-organisms by up to 95%. Engineered for performance and sustainability, it neutralises bacteria, viruses, algae and protozoa without producing any harmful gases or chemical by-products. Unlike traditional chemical treatments, the HR UV-C offers a clean, safe, and highly effective solution for maintaining crystal-clear water in pools and spas. Built for reliability and ease of integration, it's the smart choice for modern pool applications.

Number of
Models

9

Power
Consumption

40W -
128W

Flow Rates
(Min & Max)

1.5m³/h -
32m³/h

Chemical
Reduction

Up to
60%

FEATURES

- Highest UV reflective index on the market equating to supreme efficiency
- E-PTFE reaction chamber is extremely repellent, maintaining UV reflectivity
- Optional smart peristaltic dosing system for chlorine/hydrogen peroxide (Pro model only)
- Powerful sterilisation and eliminates the smell of chlorine
- Average lamp life expectancy: Up to 2 years
- Equipped with intelligent lamp life indicator (Classic & Pro models only)
- Fresh, sea and salt chlorinated water compatible
- Three sizes available: Mini (30m³), Single (55m³) & Double (110m³)
- Three models available: Standard, Classic and Pro



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/hr-uv-c

For system setup, see pages 13, 35 and 51

For dimensions, see page 61

Suitable for:



Residential
Pools



Aquatics

FOR SPAS,
SEE PAGE 60



Spas



'STANDARD' RANGE



'CLASSIC' RANGE

- + analogue lamp life indicator
- + ultra-reliable flow switch



'PRO' RANGE

- + digital display
- + ultra-reliable flow switch
- + dosing pump
- + temperature sensor



SPECIFICATIONS

Power supply:	Single Phase
Min. flow rate:	1.5m³/h
Max. flow rate:	Mini: 12,000 litres per hour; 12m³/h, Single: 16,000 litres per hour; 16m³/h, Double: 32,000 litres per hour; 32m³/h
Max. pool size:	Mini: 30,000 litres; 30m³, Single: 55,000 litres; 55m³, Double: 110,000 litres; 110m³
Max. power consumption:	Mini: 40W, Single: 64W, Double: 128W
Lamp:	UV-C (Low pressure/high output)

Lamp life:	Up to 9,000 hours
Dosing rate:	Exceeds the equivalent of 30mj/cm² at max. flow rate
IP rating:	IP65
Frequency:	50/60 Hz
Working pressure:	3 Bar maximum
Water connections:	2" /63mm stepped ABS unions + reducers 1½" /50mm
Mounting:	Vertical or horizontal wall mounting
Oxidisation processes:	UV



MODELS

100~240V 1-PHASE	LAMP OUTPUT (W)	MAX. POOL VOLUME (m³)*	FEATURES	NET WEIGHT (kg)	GROSS WEIGHT (kg)	GROSS VOLUME (m³)	PRODUCT CODE**			
							NO PLUG	UK PLUG	EURO PLUG	USA PLUG
Mini Standard	30	30	Standard features	4.530	6.060	0.063	HR-30-B	-	-	-
Mini Classic	30	30	Flow switch, analogue lamp life indicator & reset switch	4.830	6.700	0.063	-	HR-30-UK	HR-30-EU	HR-30-USA
Mini Pro	30	30	Flow switch, digital lamp life countdown & intelligent dosing pump	5.440	6.920	0.063	-	HRP-30-UK	HRP-30-EU	HRP-30-USA
Single Standard	55	55	Standard features	4.630	6.440	0.074	HR-55-B	-	-	-
Single Classic	55	55	Flow switch, analogue lamp life indicator & reset switch	6.670	9.050	0.099	-	HR-55-UK	HR-55-EU	HR-55-USA
Single Pro	55	55	Flow switch, digital lamp life countdown & intelligent dosing pump	6.620	9.010	0.099	-	HRP-55-UK	HRP-55-EU	HRP-55-USA
Double Standard	110	110	Standard features	7.660	10.010	0.098	HR-110-B	-	-	-
Double Classic	110	110	Flow switch, analogue lamp life indicator & reset switch	9.450	12.450	0.139	-	HR-110-UK	HR-110-EU	HR-110-USA
Double Pro	110	110	Flow switch, digital lamp life countdown & intelligent dosing pump	10.010	13.010	0.139	-	HRP-110-UK	HRP-110-EU	HRP-110-USA

* Minimum filtration turnaround of three times per day. ** For other plug types, please contact our sales team at sales@elecro.co.uk



UV-C POOL STERILISER

H.R. UV-C SPA

Powered by advanced amalgam lamp technology, the compact HR UV-C Spa delivers a consistent UV-C output across a wide temperature range, ensuring reliable disinfection in all conditions. It effectively neutralises bacteria, viruses, algae and protozoa without chemicals or by-products, making it a smart, sustainable choice for crystal-clear water and reduced chemical use.

Number of Models

3

Maximum Power Consumption

40W

Flow Rates (Min & Max)

1.5m³/h - 12m³/h

Chemical Reduction

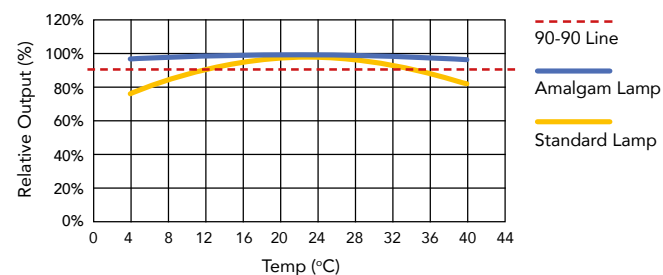
60% Up to

FEATURES

H.R. UV-C Spa has the very same features and specifications as its parent model (see page 60), but with the following additional benefits:

- Improved performance over a wider range of temperatures
- Lamp: Amalgam UV-C lamp
- Lamp life: Up to 14,000 hours

AMALGAM LAMP PERFORMANCE



For the data sheet and spare parts list, scan this QR code, or visit elec.co.uk/product/hr-uv-c-spa

For system setup, see pages 13, 35 and 51

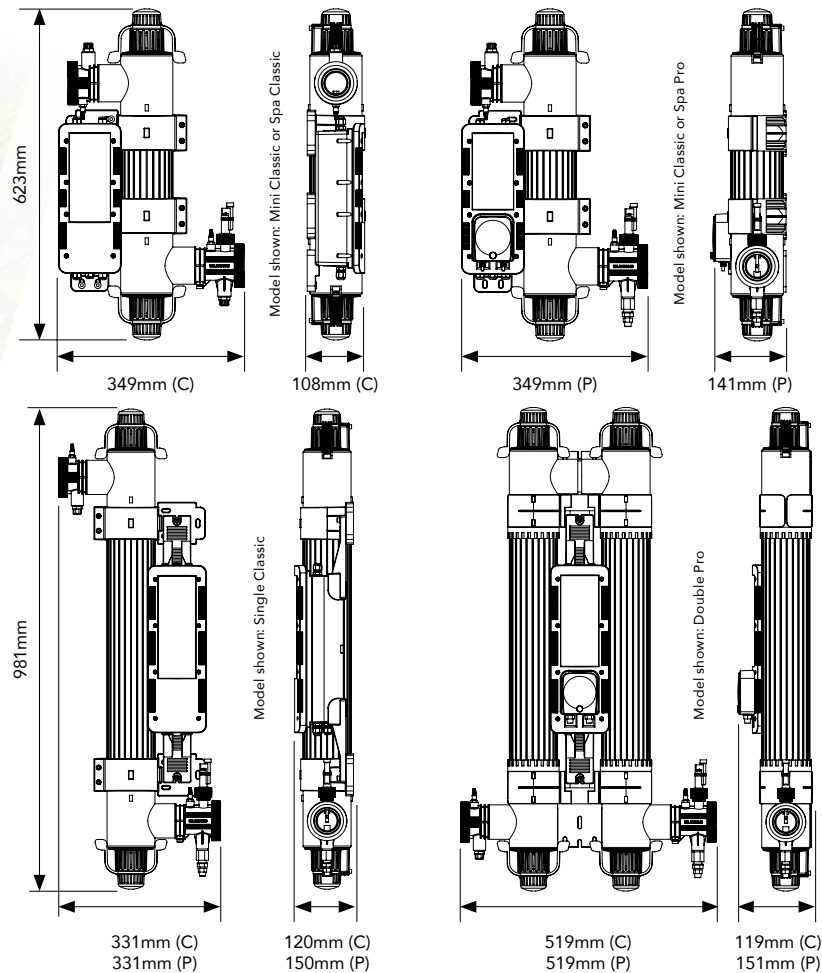
H.R. UV-C Spa Standard

H.R. UV-C Spa Classic

H.R. UV-C Spa Pro

TECHNICAL DRAWINGS

Mini, Spa, Single & Double Models



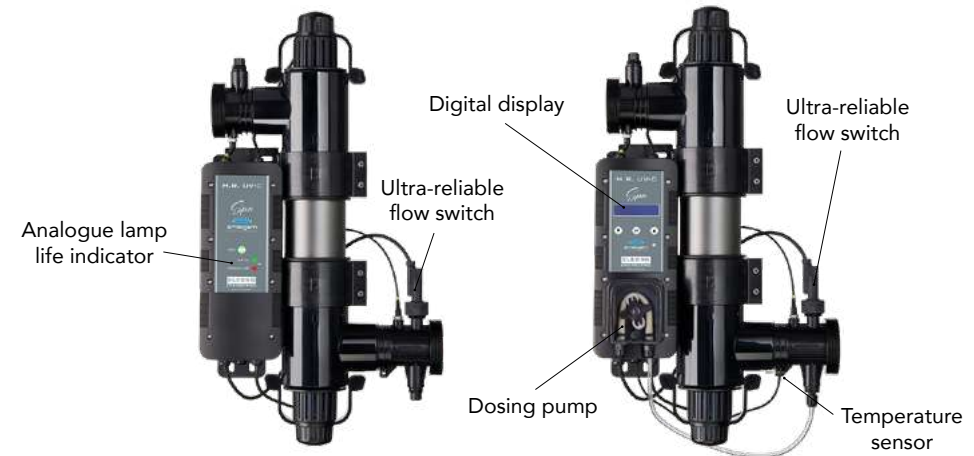
(C) Classic model, (P) Pro model

MODELS

100~240V 1-PHASE	LAMP OUTPUT (W)	MAX. POOL VOLUME (m³)*	FEATURES	NET WEIGHT (kg)	GROSS WEIGHT (kg)	GROSS VOLUME (m³)	PRODUCT CODE**			
							NO PLUG	UK PLUG	EURO PLUG	USA PLUG
Spa Standard	30	30	Standard features	4.530	6.060	0.063	HR-30-B-SPA	-	-	-
Spa Classic	30	30	Flow switch, analogue lamp life indicator & reset switch	4.830	6.700	0.063	-	HR-30-UK-SPA	HR-30-EU-SPA	HR-30-USA-SPA
Spa Pro	30	30	Flow switch, digital lamp life countdown & intelligent dosing pump	5.430	7.300	0.063	-	HRP-30-UK-SPA	HRP-30-EU-SPA	HRP-30-USA-SPA

* Minimum filtration turnaround of three times per day. ** For other plug types, please contact our sales team at sales@elecro.co.uk

KEY FEATURES (Classic & Pro models)



Intelligent Peristaltic Dosing Pump (Pro model only):

The HR UV-C has the option of being supplied complete with integral peristaltic dosing pump which is pre-programmed to dose Hydrogen Peroxide (Active Oxygen) or Chlorine. Features include:

- **Temperature Sensor:** The water temperature is monitored and the dosing amount is automatically adjusted according to the water temperature. No on-going adjustments required.
- **Flow Sensor:** The dosing will only be started when there is a consistent water flow being delivered to the unit.
- **Automated:** Dosing is set to take place at a desired time every day.
- **Dosing Hydrogen Peroxide:** Choose the correct volume in millilitres (ml) and dosing will take place at your chosen time, once every 24 hours.
- **Dosing Liquid Chlorine (Trickle Dosing):** The required daily dosage amount will be split into equally spaced intervals over a 6 hour period.
- **Digital lamp life countdown timer and LED indicator light:** Green = OK, Amber = under 500 hours remaining, Red = Lamp change required.



AOP/PHOTOCATALYTIC POOL STERILISER

QUANTUM

The Quantum AOP is a breakthrough in pool water treatment, combining photocatalytic oxidation, hydroxyl radicals, and UV technology to deliver unmatched sterilisation power. Using advanced technology, Quantum destroys bacteria, viruses, algae, protozoa and even stubborn contaminants like sun creams and urea without relying on chemicals. It's so effective, it can sterilise sewage into drinking water. Designed for performance and sustainability, Quantum emits only pure, crystal-clear water back into your pool, drastically reducing chemical usage and eliminating chlorine odour.

Number of
Models

6

Power
Consumption

**40W -
128W**

Flow Rates
(Min & Max)

**1.5m³/h
- 28m³/h**

Chemical
Reduction

80% Up to

FEATURES

- Photocatalytic TiO₂ oxidiser and clarifier
- Combined photocatalytic, hydroxyl radical and UV technology
- Keeps your family safe from dangerous micro-organisms such as cryptosporidium, adenoviruses and naegleria fowleri
- Optional smart peristaltic dosing system for chlorine, hydrogen peroxide (Pro model only)
- Average lamp life expectancy: Up to 2 years
- Equipped with intelligent lamp life indicator
- Fresh, sea and salt chlorinated water compatible
- Three sizes available: Mini (35m³), Single (65m³) & Double (130m³)
- Two models available: Classic and Pro



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/quantum

For system setup, see pages 13, 35 and 51

For dimensions, see page 65

Suitable for:



Residential
Pools



Aquatics

FOR SPAS,
SEE PAGE 64



Spas



'CLASSIC' RANGE

- + analogue lamp life indicator
- + ultra-reliable flow switch



'PRO' RANGE

- + digital display
- + ultra-reliable flow switch
- + dosing pump
- + temperature sensor



SPECIFICATIONS

Power supply:	Single Phase
Min. flow rate:	1.5m ³ /h
Max. flow rate:	Mini: 10,000 litres per hour; 10m ³ /h, Single: 14,000 litres per hour; 14m ³ /h, Double: 28,000 litres per hour; 28m ³ /h
Max. pool size:	Mini: 35,000 litres; 35m ³ , Single: 65,000 litres; 65m ³ , Double: 130,000 litres; 130m ³
Max. power consumption:	Mini: 40W, Single: 64W, Double: 128W
Lamp:	UV-C (Low pressure/high output)

Lamp life:	Up to 9,000 hours
Dosing rate:	Exceeds the equivalent of 30mj/cm ² at max. flow rate
IP rating:	IP65
Frequency:	50/60 Hz
Working pressure:	3 Bar maximum
Water connections:	2" /63mm stepped ABS unions + reducers 1½" /50mm
Mounting:	Vertical or horizontal wall mounting
Oxidisation processes:	Quantum Photocatalytic Oxidiser (PCO) & Hydroxyl Radicals (•OH)



MODELS

100~240V 1-PHASE	LAMP OUTPUT (W)	MAX. POOL VOLUME (m ³)*	FEATURES	NET WEIGHT (kg)	GROSS WEIGHT (kg)	GROSS VOLUME (m ³)	PRODUCT CODE**		
							UK PLUG	EURO PLUG	USA PLUG
Mini Classic	30	35	Flow switch, analogue lamp life indicator & reset switch	5.170	7.000	0.063	Q-35-UK	Q-35-EU	Q-35-USA
Mini Pro	30	35	Flow switch, digital lamp life countdown & intelligent dosing pump	5.770	7.600	0.063	QP-35-UK	QP-35-EU	QP-35-USA
Single Classic	55	65	Flow switch, analogue lamp life indicator & reset switch	7.290	9.680	0.099	Q-65-UK	Q-65-EU	Q-65-USA
Single Pro	55	65	Flow switch, digital lamp life countdown & intelligent dosing pump	8.090	10.480	0.099	QP-65-UK	QP-65-EU	QP-65-USA
Double Classic	110	130	Flow switch, analogue lamp life indicator & reset switch	12.150	15.150	0.139	Q-130-UK	Q-130-EU	Q-130-USA
Double Pro	110	130	Flow switch, digital lamp life countdown & intelligent dosing pump	12.650	15.650	0.139	QP-130-UK	QP-130-EU	QP-130-USA

* Minimum filtration turnaround of three times per day. ** For other plug types, please contact our sales team at sales@elecro.co.uk



AOP/PHOTOCATALYTIC POOL STERILISER

QUANTUM SPA

The Electro Quantum Spa brings cutting-edge Advanced Oxidation Process (AOP) technology to spa water treatment, combining photocatalytic oxidation, hydroxyl radicals, and UV-C to deliver powerful, chemical-free disinfection. Built with the same innovation as the Quantum range, it features advanced amalgam lamp technology for consistent, high-output performance across a wide temperature range, ideal for spas, jacuzzis and hot tubs.

Number of Models

2

Maximum Power Consumption

40W

Flow Rates (Min & Max)

1.5m³/h - 10m³/h

Chemical Reduction

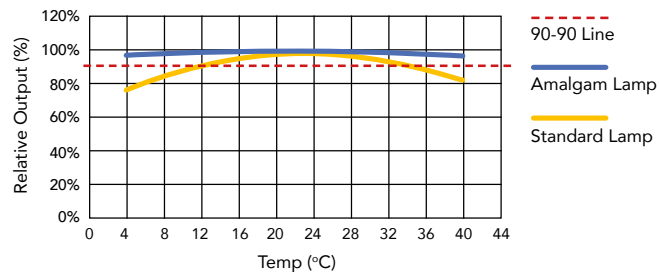
Up to 80%

FEATURES + SPECIFICATIONS

Quantum Spa has the the very same features and specifications as its parent model (see page 64), but with the following additional benefits:

- Improved performance over a wider range of temperatures
- Lamp: Amalgam UV-C lamp
- Lamp life: Up to 14,000 hours

AMALGAM LAMP PERFORMANCE



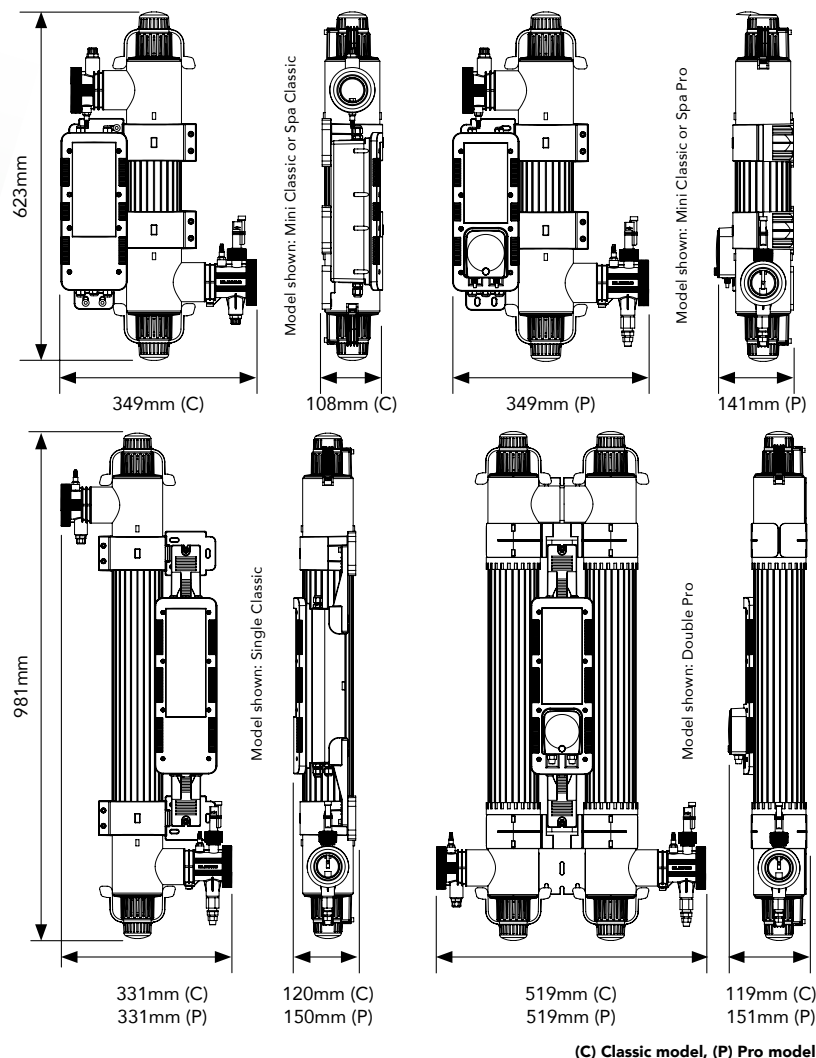
For the data sheet and spare parts list, scan this QR code, or visit elec.ro.co.uk/product/quantum-spa

For system setup, see pages 13, 35 and 51



TECHNICAL DRAWINGS

Mini, Spa, Single & Double Models

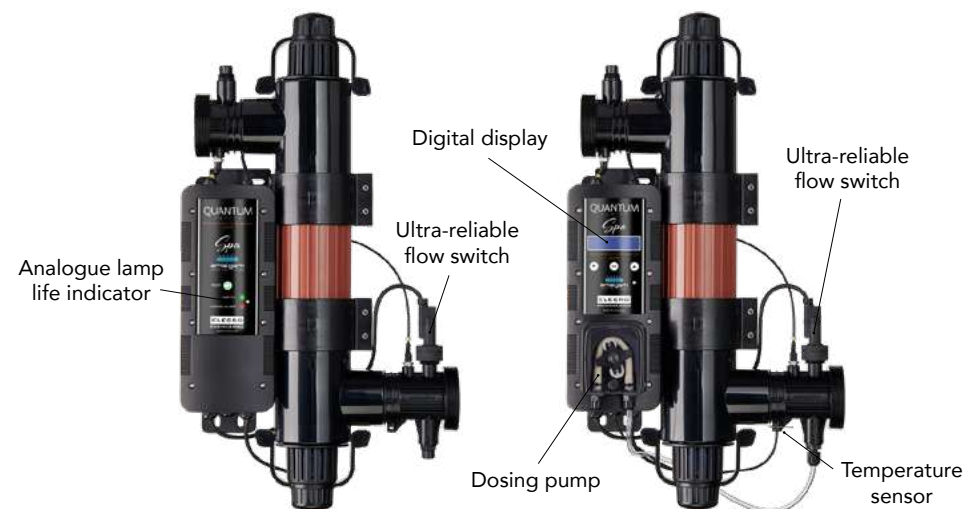


MODELS

100-240V 1-PHASE	LAMP OUTPUT (W)	MAX. POOL VOLUME (m³)*	FEATURES	NET WEIGHT (kg)	GROSS WEIGHT (kg)	GROSS VOLUME (m³)	PRODUCT CODE**		
							UK PLUG	EURO PLUG	USA PLUG
Spa Classic	30	35	Flow switch, analogue lamp life indicator & reset switch	5.170	7.000	0.063	Q-35-UK-SPA	Q-35-EU-SPA	Q-35-USA-SPA
Spa Pro	30	35	Flow switch, digital lamp life countdown & intelligent dosing pump	5.770	7.600	0.063	QP-35-UK-SPA	QP-35-EU-SPA	QP-35-USA-SPA

* Minimum filtration turnaround of three times per day. ** For other plug types, please contact our sales team at sales@elecro.co.uk

KEY FEATURES (Classic & Pro models)

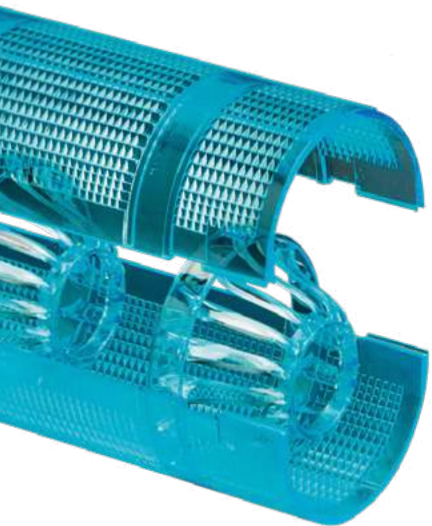


Intelligent Peristaltic Dosing Pump (Pro model only):

The Quantum has the option of being supplied complete with integral peristaltic dosing pump which is pre-programmed to dose Hydrogen Peroxide (Active Oxygen) or Chlorine. Features include:

- **Temperature Sensor:** The water temperature is monitored and the dosing amount is automatically adjusted according to the water temperature. No on-going adjustments required.
- **Flow Sensor:** The dosing will only be started when there is a consistent water flow being delivered to the unit.
- **Automated:** Dosing is set to take place at a desired time every day.
- **Dosing Hydrogen Peroxide:** Choose the correct volume in millilitres (ml) and dosing will take place at your chosen time, once every 24 hours.
- **Dosing Liquid Chlorine (Trickle Dosing):** The required daily dosage amount will be split into equally spaced intervals over a 6 hour period.
- **Digital lamp life countdown timer and LED indicator light:** Green = OK, Amber = under 500 hours remaining, Red = Lamp change required.





Quantum - Setting new standards in pool hygiene and sustainability.

Quantum harnesses a revolutionary technology, already used by high-profile industries such as hospitals, drinking and waste water purification.

Quantum uses a new photocatalytic oxidation technology: a prime focus of the science world today; possessing the power to sterilise sewage into drinking water without the use of chemicals. In fact, one of the many benefits of the Quantum is a significant reduction of residual chemicals, such as chlorine or bromine.

Built to be installed easily into any existing set-up, the Quantum is completely safe and significantly more powerful than chlorine, hydrogen peroxide, UV or ozone. Photocatalytic oxidation has an immensely powerful effect with the ability to instantaneously destroy viruses, bacteria and pathogens, and more astoundingly possessing the ability to convert sun tan oil, urea and other contaminants back into their harmless molecular form.

Meticulously designed, Elecro have developed the first cost effective, photocatalytic oxidiser specifically for the swimming pool industry, for toxin free swimming. It eliminates undesirable side-effects such as sore eyes, itchy dry skin, discoloured hair and strong odour. It also makes water crystal clear, and most importantly it creates no risk to the lungs or health of bathers and swimming pool attendants.

Product overview

- **Safe:** Only pure, sterilised water is released from the reaction chamber.
- **Clean:** Makes the water sparkle like diamonds in a way never seen before.
- **Efficient:** Consumes no more electricity than a common light bulb, providing continuous savings.
- **Effective:** The only technology available with the ability to instantly destroy all viruses, bacteria and pathogens, and like no other device, will break down oil and contaminants.

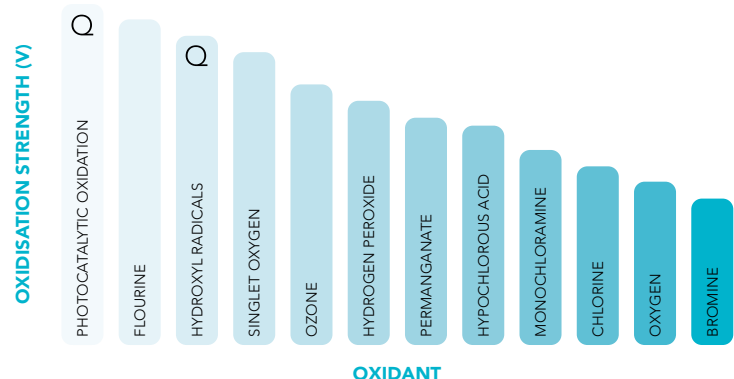
“...water that sparkles like diamonds.”



- **Powerful:** The sterilising effect of the Quantum photocatalytic oxidiser (PCO) exceeds the effects of boiling water.
- **Easy To Use:** Comes pre-assembled with all necessary sensors and control components: no complicated parts to piece together. The bulb replacement indicator will alert after 9,000 hours of use.
- **Easy Installation:** Corrosion resistant, regardless of any salt or chemical concentrations in the water. As the reaction surface is truly catalytic and therefore it is never consumed or altered.

Why Quantum?

With a wide range of products available on the market that offer a variety of technologies to sanitise swimming pool water, how do you decide what method is best for you? The table below identifies some key players including chlorine, ozone, hydroxyl radicals, and photocatalytic oxidation at the top as the strongest and most effective sterilising process in existence.



Sterilising swimming pools has always been a matter of finding a balance between using chemicals strong enough to destroy the most harmful germs that may cultivate in the pool, whilst at the same time limiting the negative impact of the treatment method on humans. Currently, chlorine is the most widely used sterilisation method. The side effects though can be irritation to the skin and eyes, and the inconvenience of continually topping up the dosage.

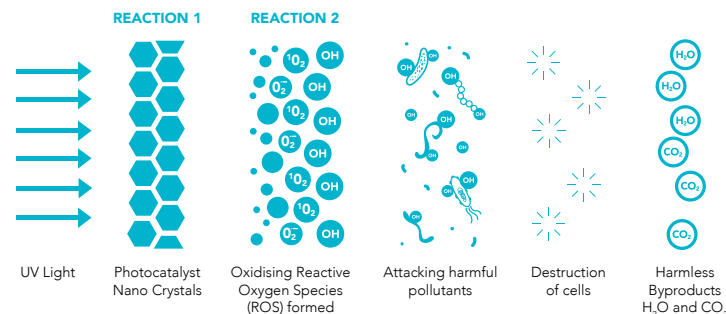
Chlorine and ozone are also known to release gas that hovers above the swimming pool and can be hazardous to breathing. In contrast the photocatalytic oxidation reaction is contained within the reaction chamber releasing only pure, fresh water, clean enough to drink.

Quantum's advanced cleaning technology replicates nature's own technique for sterilising our planet, making it habitable. A photocatalytic oxidiser, known by scientists as "Nature's Silver Bullet", neutralises what chlorine cannot and achieves exponential reductions in unwanted bacteria, pathogens and viruses. Chlorine, ozone and UV are ineffective against *Naegleria fowleri* and Adenovirus, whereas photocatalytic oxidation has proved that nothing escapes it. Built for ease of use – simply set and relax! With the Quantum you are in complete control.

How does it work? The Science...

Reaction 1: Quantum Photocatalytic Oxidiser (PCO)

Quantum works in a similar way to a car's exhaust system, where a catalyst uses the combination of heat and Platinum coated baffles to convert the poisonous gases coming from the engine into carbon dioxide and water.



Quantum uses light as fuel to energise its sophisticated catalyst array with rare elements including titanium dioxide anatase nanocatalyst. The resulting reaction, not only has the power to consume any oils or organics present in the water, it also possesses the power to abundantly and momentarily split the water molecules into what are called Hydroxyl Radicals, Superoxide and Singlet Oxygen, also known as Reactive Oxygen Species (ROS). The combination of effects equip quantum with far more power to purify water than a chemical oxidising agent, such as chlorine or bromine.

Reaction 2: Reactive Oxygen Species (ROS)

Reactive oxygen species are molecules derived from water with unpaired electrons, highly reactive, produced by the PCO reaction.

The exceptionally mobile molecules that fill the reaction chamber are highly volatile and able to destroy everything in their path. Once the Reactive Oxygen Species reacts with the pollutant, it converts itself back into water.

Reactive Oxygen Species can be made in many ways, however instead of using more chemicals that are damaging to health, the Quantum utilises photocatalytic oxidation. This is the safest and most effective method against pollutants.



COMMERCIAL POOL UV STERILISER

SPECTRUM

Powerful, eco-friendly and cost-effective sanitation for large scale, high-use commercial pools. Reduce chemical disinfectants and promote water clarity, swimmer health and environmental sustainability.

Number of Models

14

Power Consumption

70W - 2450W

Flow Rates (Maximum)

590 m³/h

Ingress Protection Rating

44

FEATURES

- Standard model - Includes LED indicator and lamp life counter
- Classic model - Includes 7" touch screen display with UV intensity monitor
- Pro model - Includes 7" touch screen display with dosage rate monitor
- Optimised design using Computational Fluid Dynamics (CFD) analysis
- Quick Fit Connection (QFC) - lamp installation and replacement in seconds
- Stainless Steel 316L / Titanium* chamber for maximum corrosion resistance
- Wi-Fi and cloud connectivity (Classic & Pro)
- Sea** and salt chlorinated water compatible
- Temperature#, flow sensor and pump interlock
- UV intensity port (Classic & Pro)
- Low pressure amalgam lamps with 16,000 hours lamp life expectancy
- 6 bar pressure tolerance
- Plug & Play controller with advanced monitoring and notifications
- Easy integration to existing systems via RS485



For the data sheet and spare parts list, scan this QR code, or visit elecro.co.uk/product/spectrum

For system setup, see page 35

* Titanium chamber available on request
 ** Compatible with Titanium chambers only
 # Not included with Standard model



Suitable for:



Commercial Pools

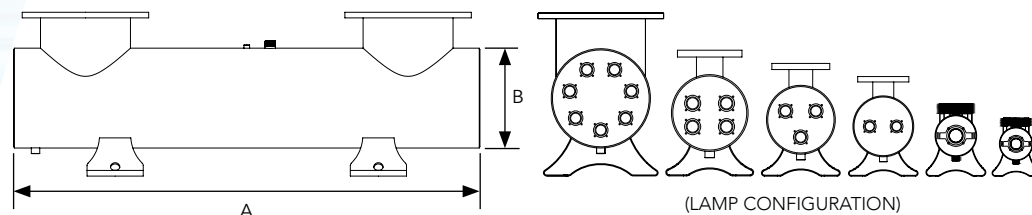
SPECIFICATIONS

Power supply: Single Phase 220 - 240V
Flow rate: Up to 590m³/h
Power consumption: 70 - 2450W
Lamp: Low pressure Amalgam lamps
Lamp life: Up to 16,000 hours
IP rating: IP44
Frequency: 50/60 Hz

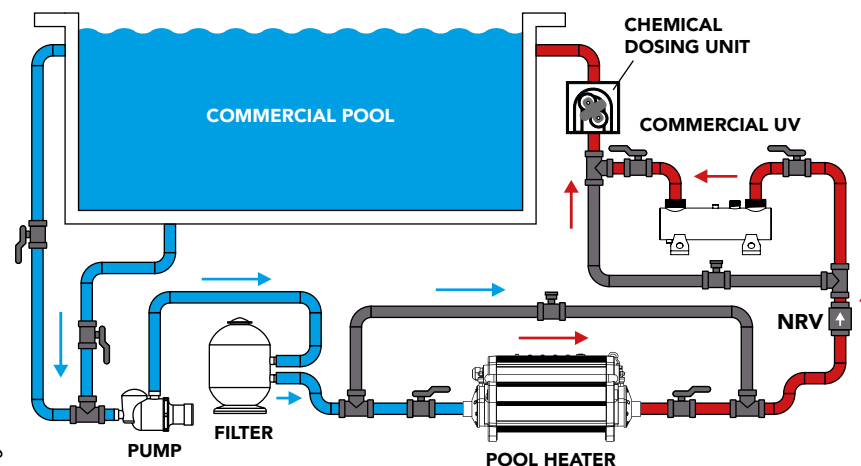
Dosing rate: 30mj/cm², 40mj/cm² and 60mj/cm² at rated flow rate
Working pressure: 6 Bar maximum
Water connections: See table below
Salt water: 100% chlorinated salt and sea water safe
Mounting: Floor or wall mounting*

* Dependent on model size

DIMENSIONS (Reactor)



SYSTEM SETUP



MODELS (UV Transmittance >95%)

TOTAL POWER (W)	LAMP POWER (W)	NO. OF LAMPS	REACTOR SIZE			INLET / OUTLET PORT	FLOW RATE m ³ /h (AVERAGE IRRADIANCE)			PRODUCT CODE		
			(W)	WIDTH	VOLUME		30mj/cm ²	40mj/cm ²	60mj/cm ²	STANDARD	CLASSIC	PRO
			A (mm)	B (mm)	(Ltr)							
70	57	1	358	102	2.7	1.5"/50mm & 2"/63mm	5.7	4.2	2.8	SP-S-57-102	SP-C-57-102	SP-P-57-102
170	150	1	990	102	7.4	1.5"/50mm & 2"/63mm	20	14	9	SP-S-150-102	SP-C-150-102	SP-P-150-102
230	207	1	990	102	7.4	1.5"/50mm & 2"/63mm	25	18	12	SP-S-200-102	SP-C-200-102	SP-P-200-102
150	150	1	990	170	21.8	2.5" & 75mm	34.5	26	17	SP-S-150-170	SP-C-150-170	SP-P-150-170
230	200	1	990	170	21.8	2.5" & 75mm	43	32	21.5	SP-S-200-170	SP-C-200-170	SP-P-200-170
350	150	2	990	170	21.1	DN80	62	46	31	SP-S-300-170	SP-C-300-170	SP-P-300-170
460	200	2	990	170	21.1	DN80	77	58	38.5	SP-S-400-170	SP-C-400-170	SP-P-400-170
510	150	3	990	212	32.8	DN125	112	83	55	SP-S-450-212	SP-C-450-212	SP-P-450-212
660	200	3	990	212	32.8	DN125	133	102	68	SP-S-620-212	SP-C-620-212	SP-P-620-212
680	150	4	990	260	49.7	DN150	170	127	85	SP-S-600-260	SP-C-600-260	SP-P-600-260
880	200	4	990	260	49.7	DN150	212	159	106	SP-S-800-260	SP-C-800-260	SP-P-800-260
1050	320	3	1539	310	112.8	DN250	279	209	139	SP-S-960-310	SP-C-960-310	SP-P-960-310
1720	320	5	1539	310	110.7	DN250	428	320	213	SP-S-1600-310	SP-C-1600-310	SP-P-1600-310
2450	320	7	1539	310	108.5	DN250	590	442	294	SP-S-2240-310	SP-C-2240-310	SP-P-2240-310

GENERAL CONDITIONS OF SALES

1. Interpretation

1.1 Definitions:

Business Day: a day (other than a Saturday, Sunday or public holiday) when banks in London are open for business. Conditions: the terms and conditions set out in this document as amended from time to time in accordance with clause 12.4. Contract: the contract between the Supplier and the Customer for the sale and purchase of the Goods in accordance with the Order and these Conditions. Force Majeure Event: an event or circumstance beyond a party's reasonable control. Goods: the goods (or any part of them) set out in the Order. Order: The Customer's order for the Goods, as set out in the Order Confirmation Form or such other form as the Supplier may confirm as having been accepted. Order Confirmation Form: the completed Order Confirmation Form in relation to an Order in the form provided by the Supplier. Specification: any specification for the Goods, including any related plans and drawings, provided by the Customer to the Supplier or otherwise agreed in writing between the Customer and the Supplier.

1.2 Interpretation:

- (a) a reference to a statute or statutory provision is a reference to such statute or provision as amended or re-enacted. A reference to a statute or statutory provision includes any subordinate legislation made under that statute or statutory provision, as amended or re-enacted.
- (b) any phrase introduced by the terms including, include, in particular or any similar expression shall be construed as illustrative and shall not limit the sense of the words preceding those terms.
- (c) a reference to writing or written includes emails.

2. Basis of contract

- 2.1 These Conditions apply to the Contract to the exclusion of any other terms that the Customer seeks to impose or incorporate, or which are implied by trade, custom, practice or course of dealing.
 - 2.2 The Order constitutes an offer by the Customer to purchase the Goods in accordance with these Conditions. The Customer is responsible for ensuring that the terms of the Order and any applicable Specification are complete and accurate.
 - 2.3 The Customer must send all Orders to sales@elecra.co.uk.
 - 2.4 The Order shall only be deemed to be accepted when the Supplier issues a written acceptance of the Order, at which point the Contract shall come into existence. In certain circumstances and as part of our fraud prevention measures the Supplier may require proof of identity from the Customer before accepting any Order.
 - 2.5 The Customer waives any right it might otherwise have to rely on any term endorsed upon, delivered with or contained in any documents of the Customer that is inconsistent with these Conditions.
 - 2.6 Any samples, drawings, descriptive matter or advertising produced by the Supplier and any descriptions or illustrations including dimensions and weights contained in the Supplier's catalogues, website, brochures or other marketing materials or are indicative only and given for the sole purpose of giving an approximate idea of the Goods referred to in them and shall not form part of the Contract or have any contractual force.
 - 2.7 A quotation for the Goods given by the Supplier shall not constitute an offer. A quotation shall only be valid for a period of 30 Business Days from its date of issue unless specified otherwise in writing.
- ### 3. Goods
- 3.1 The Goods are described in the Supplier's catalogue or website on an indicative basis and for illustration purposes only.
 - 3.2 The Supplier reserves the right to amend the Specification if required by any applicable statutory or regulatory requirements.
- ### 4. Delivery
- 4.1 The Supplier shall ensure that each delivery of the Goods is accompanied by a delivery note that shows the date of the Order, the type and quantity of the Goods (including the code number of the Goods, where applicable) and, if the Goods are being delivered by instalments, the outstanding balance of Goods remaining to be delivered.
 - 4.2 Depending on the agreement of the parties in the Order the Goods shall either be:

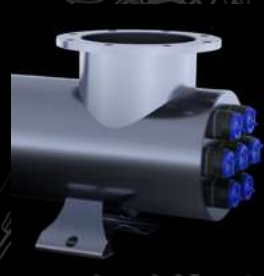
- (a) delivered by the Supplier (at the Customer's cost and risk) to the location set out in the Order or such other location as the parties may agree (Delivery Location) at any time after the Supplier notifies the Customer that the Goods are ready; or
 - (b) collected by the Customer from the Supplier's premises at Unit 11 Gunnels Wood Park, Stevenage, Hertfordshire, SG1 2BH, UK or such other location as may be advised by the Supplier prior to delivery (Delivery Location) within three Business Days of the Supplier notifying the Customer that the Goods are ready.
- 4.3 Delivery is completed on the completion of respective unloading or loading of the Goods at the relevant Delivery Location by the Customer.
 - 4.4 Any dates quoted for delivery are approximate only, and the time of delivery is not of the essence. The Supplier shall not be liable for any delay in delivery of the Goods that is caused by a Force Majeure Event or the Customer's failure to provide the Supplier with adequate delivery instructions or any other instructions that are relevant to the supply of the Goods.
 - 4.5 The date of delivery shall be at least 30 days from the date the Order is accepted by the Supplier.
 - 4.6 Subject to clause 4.5 the Supplier shall use reasonable endeavours to despatch all Goods that are in stock on the same day that the Order is accepted where such acceptance takes place before 12:00 pm.
 - 4.7 If the Supplier fails to deliver the Goods, its liability shall be limited to the costs and expenses incurred by the Customer in obtaining replacement goods of similar description and quality in the cheapest market available, less the price of the Goods. The Supplier shall have no liability for any failure to deliver the Goods to the extent that such failure is caused by a Force Majeure Event or the Customer's failure to provide the Supplier with adequate delivery instructions or any other instructions that are relevant to the supply of the Goods.
 - 4.8 If the Customer fails to either collect the Goods or accept delivery of the Goods within three Business Days of the Supplier notifying the Customer that the Goods are ready, then, except where such failure or delay is caused by a Force Majeure Event or the Supplier's failure to comply with its obligations under the Contract: (a) delivery of the Goods shall be deemed to have been completed at 9:00 am on the third Business Day after the day on which the Supplier notified the Customer that the Goods were ready; and (b) the Supplier shall store the Goods until delivery takes place, and charge the Customer for all related costs and expenses (including insurance).
 - 4.9 If ten Business Days after the day on which the Supplier notified the Customer that the Goods were ready for delivery the Customer has not collected or accepted delivery of them, the Supplier may resell or otherwise dispose of part or all of the Goods charge the Customer for any shortfall below the price of the Goods.
 - 4.10 The Supplier may deliver the Goods by instalments, which shall be invoiced and paid for separately but where delivery by instalment is due to the Suppliers' operational reasons or the Goods are not in stock then delivery shall be at the Suppliers' cost. Each instalment shall constitute a separate contract. Any delay in delivery or defect in an instalment shall not entitle the Customer to cancel any other instalment.
 - 4.11 The Customer shall be responsible for any export and import clearance in connection with this Contract. The Supplier shall provide the Customer, at the Customer's request and cost, with all the assistance required to obtain an export licence.
- ### 5. Acceptance and defective products
- 5.1 The Customer may reject any Goods delivered to it that do not materially comply with clause 6.1 or the Specification provided that:
 - (a) notice of rejection is given to the Supplier: i. in the case of a defect or error that is apparent on normal visual inspection within 5 days of delivery; ii. in the case of a latent defect, within 5 days of the latent defect having become apparent; and
 - (b) none of the events listed in clause 6.5 apply.
 - 5.2 If the Customer fails to give notice of rejection in accordance with clause 5.1, it shall be deemed to have accepted these Products.
 - 5.3 If the Customer rejects Goods under clause 5.1 then the Customer shall return the rejected Goods to the Supplier whereupon the Supplier shall inspect the rejected Goods. Where the rejected Goods are found to be defective, the Customer shall be

entitled to:

- (a) require the Supplier to repair or replace the rejected Goods; or
 - (b) require the Supplier to repay the price of the rejected Goods in full by bank transfer.
- ### 6. Quality
- 6.1 The Supplier warrants that on delivery the Goods shall:
 - (a) conform in all material respects with their description and any applicable Specification; and
 - (b) be free from material defects in design, material and workmanship.
 - 6.2 For Goods supplied to Customers within Europe, the warranties under clause 6.1 shall apply for two years from the date of delivery (the "Warranty Period")
 - 6.3 For Goods supplied to Customers based outside Europe the warranties at clause 6.1 shall apply for one year from the date of delivery.
 - 6.4 Subject to clause 6.5, if:
 - (a) the Customer gives notice in writing to the Supplier during the warranty period within a reasonable time of discovery that some or all of the Goods do not comply with the warranty set out in clause 6.1;
 - (b) the Supplier is given a reasonable opportunity of examining such Goods; and
 - (c) the Customer (if asked to do so by the Supplier) returns such Goods to the Supplier's place of business at the Supplier's cost, the Supplier shall, at its option, repair or replace the defective Goods, or refund the price of the defective Goods in full.
 - 6.5 The Supplier shall not be liable for the Goods' failure to comply with the warranty set out in clause 6.1 in any of the following events:
 - (a) the Customer makes any further use of such Goods after giving notice in accordance with clause 6.4;
 - (b) the defect arises because the Customer failed to follow the Supplier's oral or written instructions as to the storage, commissioning, installation, use and maintenance of the Goods or (if there are none) good trade practice regarding the same;
 - (c) the defect arises as a result of the Supplier following any drawing, design or Specification supplied by the Customer;
 - (d) the Customer alters or repairs such Goods without the written consent of the Supplier;
 - (e) the defect arises as a result of fair wear and tear, wilful damage, damage by chemicals, negligence, or abnormal storage or working conditions; or
 - (f) the Goods differ from their description or the Specification as a result of changes made to ensure they comply with applicable statutory or regulatory requirements.
 - 6.6 Where Goods are rejected by the Client pursuant to either clause 5.3 or clause 6.4 and said rejected Goods are not found to be defective the Customer must reimburse the Supplier for its reasonable costs in inspecting the rejected Goods and any delivery costs borne by the Supplier.
 - 6.7 Except as provided in this clause 6, the Supplier shall have no liability to the Customer in respect of the Goods' failure to comply with the warranty set out in clause 6.1.
 - 6.8 The terms implied by sections 13 to 15 of the Sale of Goods Act 1979 are, to the fullest extent permitted by law, excluded from the Contract.
 - 6.9 These Conditions shall apply to any replacement Goods supplied by the Supplier.
- ### 7. Title and risk
- 7.1 Subject to clause 7.2 the risk in the Goods shall pass to the Customer on completion of delivery.
 - 7.2 Title to the Goods shall not pass to the Customer until the Supplier receives payment in full (in cash or cleared funds) for the Goods and any other goods that the Supplier has supplied to the Customer in respect of which payment has become due, in which case title to the Goods shall pass at the time of payment of all such sums.
 - 7.3 Until title to the Goods has passed to the Customer, the Customer shall:
 - (a) store the Goods separately from all other goods held by the Customer so that they remain readily identifiable as the Supplier's property;
 - (b) not remove, deface or obscure any identifying mark or packaging on or relating to the Goods;
 - (c) maintain the Goods in satisfactory condition and keep them insured against all risks for their full price from the date of delivery;

- (d) notify the Supplier immediately if it becomes subject to any of the events listed in clause 9.1; and
- (e) give the Supplier such information relating to the Goods as the Supplier may require from time to time.
- 7.4 If before title to the Goods passes to the Customer the Customer becomes subject to any of the events listed in clause 9.1, then, without limiting any other right or remedy the Supplier may have the Supplier may at any time:
- require the Customer to immediately deliver up all Goods in its possession that have not been resold, or irrevocably incorporated into another product; and
 - if the Customer fails to do so promptly, enter any premises of the Customer or of any third party where the Goods are stored in order to recover them.
8. Price and payment
- 8.1 The price of the Goods shall be the price set out in the Order, or, if no price is quoted, the price set out in the Supplier's published price list in force as at the date of delivery.
- 8.2 The Supplier may, without notice to the Customer at any time up to five Business Days before delivery, increase the price of the Goods to reflect any increase in the cost of the Goods that is due to:
- any factor beyond the Supplier's control (including foreign exchange fluctuations, increases in taxes and duties, and increases in labour, materials and other manufacturing costs);
 - any request by the Customer to change the delivery date(s), quantities or types of Goods ordered, or the Specification;
 - any administrative or clerical error of the Supplier; or
 - any delay caused by any instructions of the Customer or failure of the Customer to give the Supplier adequate or accurate information or instructions.
- 8.3 The price of the Goods:
- excludes amounts in respect of value added tax (VAT), which the Customer shall additionally be liable to pay to the Supplier at the prevailing rate, subject to the receipt of a valid VAT invoice; and
 - excludes the costs and charges of packaging, insurance and transport of the Goods, which shall be invoiced to the Customer.
- 8.4 The Supplier may invoice the Customer for the Goods on or at any time after the acceptance of an Order.
- 8.5 The Customer shall pay the invoice in full and in cleared funds prior to delivery of the Goods and delivery shall not be made until payment has been received in full by the Customer. Payment to the Supplier shall be either by:
- bank transfer to the bank account nominated in writing by the Supplier;
 - by cheque; or
 - credit or debit card. All payments shall be in pounds sterling unless otherwise agreed.
- 8.6 If the Customer fails to make any payment due to the Supplier under the Contract by the due date for payment, then:
- the Customer shall pay interest on the overdue amount at the rate of 4% per annum above Barclays Bank plc's base rate from time to time. Such interest shall accrue on a daily basis from the due date until actual payment of the overdue amount, whether before or after judgment. The Customer shall pay the interest together with the overdue amount; and
 - the Supplier may suspend delivery of the Goods.
- 8.7 The Customer shall pay all amounts due under the Contract in full without any set-off, counterclaim, deduction or withholding (except for any deduction or withholding required by law). The Supplier may at any time, without limiting any other rights or remedies it may have, set off any amount owing to it by the Customer against any amount payable by the Supplier to the Customer.
9. Termination
- 9.1 Without limiting its other rights or remedies, the Supplier may terminate this Contract with immediate effect by giving written notice to the Customer if:
- the Customer commits a material breach of any term of the Contract and (if such a breach is remediable) fails to remedy that breach within 15 days of that party being notified in writing to do so;
 - the Customer takes any step or action in connection with its entering administration, provisional liquidation or any composition or arrangement with its creditors (other than in relation to a solvent restructuring), being wound up (whether voluntarily or by order of the court, unless for the purpose of a solvent restructuring), having a receiver appointed to any of its assets or ceasing to carry on business or, if the step or action is taken in another jurisdiction, in connection with any analogous procedure in the relevant jurisdiction;
 - the Customer suspends, threatens to suspend, ceases or threatens to cease to carry on all or a substantial part of its business; or
 - the Customer's financial position deteriorates to such an extent that in the Supplier's opinion the Customer's capability to adequately fulfil its obligations under the Contract has been placed in jeopardy.
- 9.2 Without limiting its other rights or remedies, the Supplier may suspend provision of the Goods under the Contract or any other contract between the Customer and the Supplier if the Customer becomes subject to any of the events listed in clause, or the Supplier reasonably believes that the Customer is about to become subject to any of them, or if the Customer fails to pay any amount due under this Contract on the due date for payment.
- 9.3 Without limiting its other rights or remedies, the Supplier may terminate the Contract with immediate effect by giving written notice to the Customer if the Customer fails to pay any amount due under the Contract on the due date for payment.
- 9.4 On termination of the Contract for any reason the Customer shall immediately pay to the Supplier all of the Supplier's outstanding unpaid invoices and interest.
- 9.5 Termination of the Contract shall not affect any of the parties' rights and remedies that have accrued as at termination, including the right to claim damages in respect of any breach of this Contract that existed at or before the date of termination.
- 9.6 Any provision of the Contract that expressly or by implication is intended to come into or continue in force on or after termination shall remain in full force and effect.
10. Limitation of liability
- 10.1 Nothing in these Conditions shall limit or exclude the Supplier's liability for:
- death or personal injury caused by its negligence, or the negligence of its employees, agents or subcontractors (as applicable);
 - fraud or fraudulent misrepresentation; or
 - any matter in respect of which it would be unlawful for the Supplier to exclude or restrict liability.
- 10.2 Subject to clause 10.1:
- the Supplier shall under no circumstances whatsoever be liable to the Customer, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, for any loss of profit, or any indirect or consequential loss arising under or in connection with the Contract; and
 - the Supplier's total liability to the Customer in respect of all other losses arising under or in connection with the Contract, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, shall in no circumstances exceed the price paid for the Goods.
11. Force majeure Neither party shall be in breach of this Contract nor liable for delay in performing, or failure to perform, any of its obligations under this Contract if such delay or failure result from a Force Majeure Event. If the period of delay or non-performance continues for 90 days, the party not affected may terminate this Contract by giving 10 working days written notice to the affected party.
12. General
- 12.1 Assignment and other dealings.
- The Supplier may at any time assign, transfer, mortgage, charge, subcontract or deal in any other manner with all or any of its rights or obligations under the Contract.
 - The Customer may not assign, transfer, mortgage, charge, subcontract, declare a trust over or deal in any other manner with any or all of its rights or obligations under the Contract without the prior written consent of the Supplier.
- 12.2 Confidentiality.
- Each party undertakes that it shall not at any time, disclose to any person any confidential information concerning the business, affairs, customers, clients or suppliers of the other party or of any member of the group to which the other party belongs, except as permitted by clause 12.2(b). For the purposes of this clause, group means, in relation to a party, that party, any subsidiary or holding company from time to time of that party, and any subsidiary from time to time of a holding company of that party.
- (b) Each party may disclose the other party's confidential information:
- to its employees, officers, representatives or advisers who need to know such information for the purposes of exercising the party's rights or carrying out its obligations under or in connection with this Contract. Each party shall ensure that its employees, officers, representatives or advisers to whom it discloses the other party's confidential information comply with this clause 12.2; and
 - as may be required by law, a court of competent jurisdiction or any governmental or regulatory authority.
- (c) No party shall use any other party's confidential information for any purpose other than to exercise its rights and perform its obligations under or in connection with this Contract.
- 12.3 Entire agreement.
- This Contract constitutes the entire agreement between the parties and supersedes and extinguishes all previous agreements, promises, assurances, warranties, representations and understandings between them, whether written or oral, relating to its subject matter.
 - Each party agrees that it shall have no remedies in respect of any statement, representation, assurance or warranty (whether made innocently or negligently) that is not set out in this agreement. Each party agrees that it shall have no claim for innocent or negligent misrepresentation based on any statement in this agreement.
- 12.4 Variation. No variation of this Contract shall be effective unless it is in writing and signed by the parties (or their authorised representatives).
- 12.5 Waiver. No failure or delay by a party to exercise any right or remedy provided under the Contract or by law shall constitute a waiver of that or any other right or remedy, nor shall it prevent or restrict the further exercise of that or any other right or remedy. No single or partial exercise of such right or remedy shall prevent or restrict the further exercise of that or any other right or remedy.
- 12.6 Severance. If any provision or part-provision of the Contract is or becomes invalid, illegal or unenforceable, it shall be deemed modified to the minimum extent necessary to make it valid, legal and enforceable. If such modification is not possible, the relevant provision or part-provision shall be deemed deleted. Any modification to or deletion of a provision or part-provision under this clause shall not affect the validity and enforceability of the rest of the Contract.
- 12.7 Notices.
- Any notice or other communication given to a party under or in connection with the Contract shall be in writing, addressed to that party at its registered office (if it is a company) or its principal place of business (in any other case) or such other address as that party may have specified to the other party in writing in accordance with this clause, and shall be delivered personally, sent by pre-paid first class post or other next working day delivery service, commercial courier, or email.
 - A notice or other communication shall be deemed to have been received: if delivered personally, when left at the address referred to in clause 12.7(a); if sent by pre-paid first class post or other next working day delivery service, at 9.00 am on the second Business Day after posting; if delivered by commercial courier, on the date and at the time that the courier's delivery receipt is signed; or, if sent by email, one Business Day after transmission.
 - The provisions of this clause shall not apply to the service of any proceedings or other documents in any legal action.
- 12.8 Third party rights. No one other than a party to this Contract shall have any right to enforce any of its terms.
- 12.9 Governing law. The Contract, and any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with it or its subject matter or formation, shall be governed by and construed in accordance with the law of England and Wales. Jurisdiction. Each party irrevocably agrees that the courts of England and Wales shall have exclusive jurisdiction to settle any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with this Contract or its subject matter or formation.

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