



# **Escalade Welded Heat Exchanger Installation & Operating Manual**



# **CONTENTS**

<b>1. PRODUCT OVERVIEW .....</b>	<b>3</b>
<b>2. GENERAL INSTALLATION INSTRUCTION .....</b>	<b>4</b>
2.1 Mounting instruction .....	4
2.2 Flow Direction.....	6
<b>3. WATER QUALITY.....</b>	<b>7</b>
<b>4. WARRANTY .....</b>	<b>7</b>

# INTRODUCTION

Thank you for purchasing a Escalade swimming pool heat exchanger manufactured to the highest standards in England.

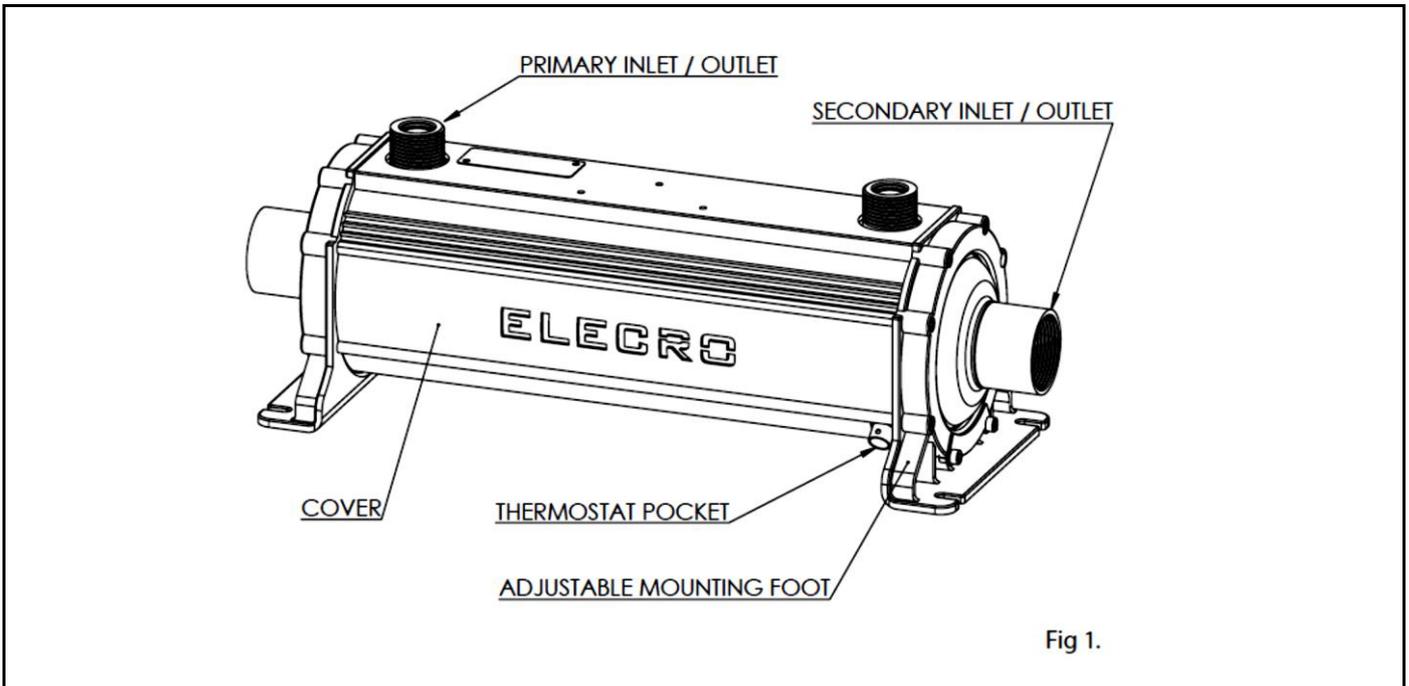
To ensure years of trouble-free service, please **read and follow** these instructions for proper installation, maintenance and use.

**WARNING:** Failure to install the unit correctly may result in the warranty being void.

***Please retain this manual for future reference.***

## 1. PRODUCT OVERVIEW

### Standard Escalade Welded Heat Exchanger



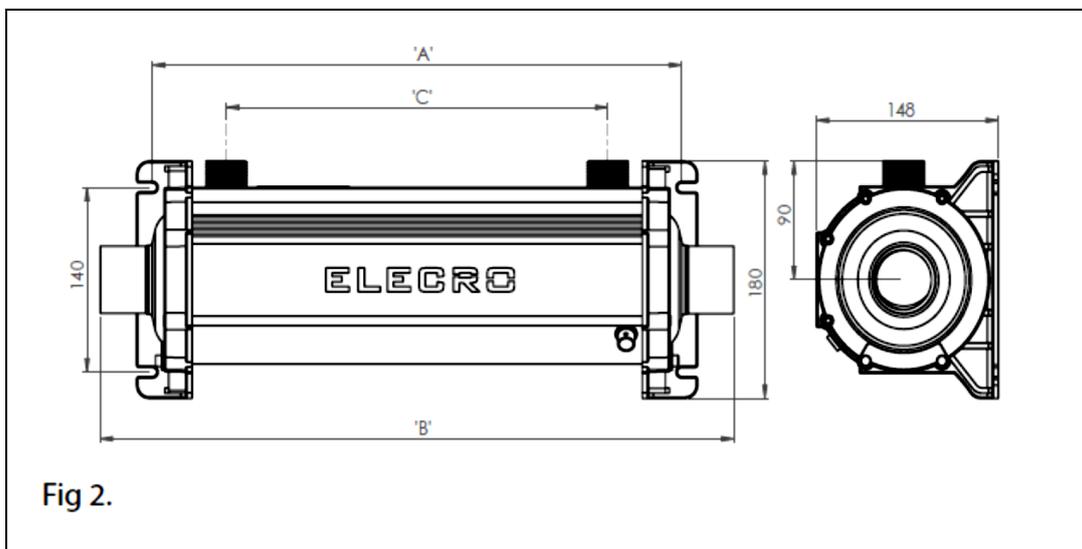
### SPECIFICATION:

Standard Power Output	Primary (HOT) Flow [m <sup>3</sup> /h]	Primary (HOT) Head Loss (kpa)	Secondary (POOL) Flow [m <sup>3</sup> /h]	Secondary (POOL) Head Loss (kpa)	$\Delta T$ 50°C [kW]	$\Delta T$ 60°C [kW]	$\Delta T$ 70°C [kW]
30-kW	1.1	9.7	15	11.7	26	30	34
40-kW	2.4	23	19	16.1	34	37	40
75-kW	3.0	52	21	17.8	54	64	75

- $\Delta T$  = Temperature difference between Primary (Hot) and Secondary (Pool)
- To calculate BTU, multiply kW x 3412
- kW x 3412 = BTU Output

**Note:** Maximum primary operating temperature is 95°C

## Dimensions (mm):



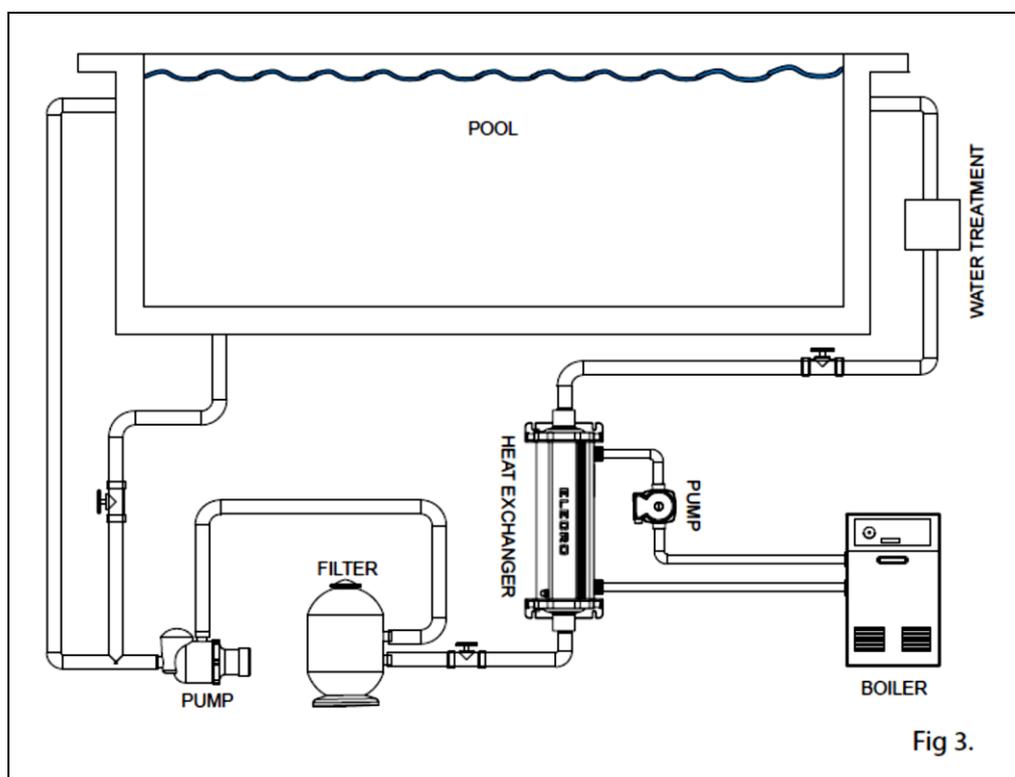
	A	B	C
30 - kW	382	467	262
40 - kW	430	515	310
75 - kW	674	759	554

## 2. GENERAL INSTALLATION INSTRUCTION

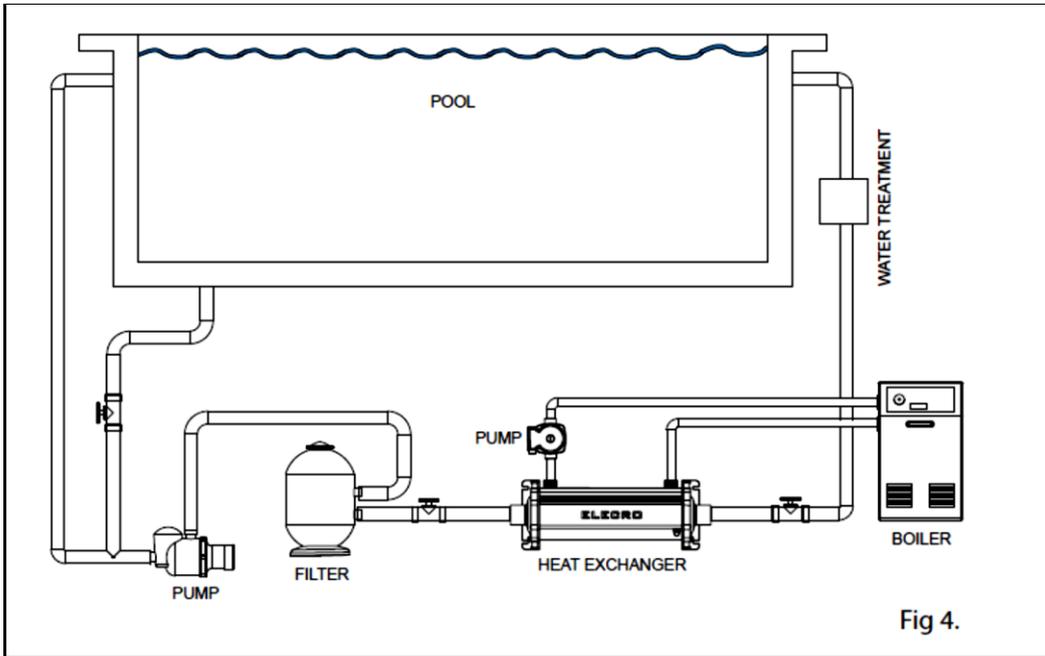
### 2.1 Mounting instruction

The Elecro Heat Exchanger can be installed either horizontally or vertically. (Please see Figs. 3 and 4).

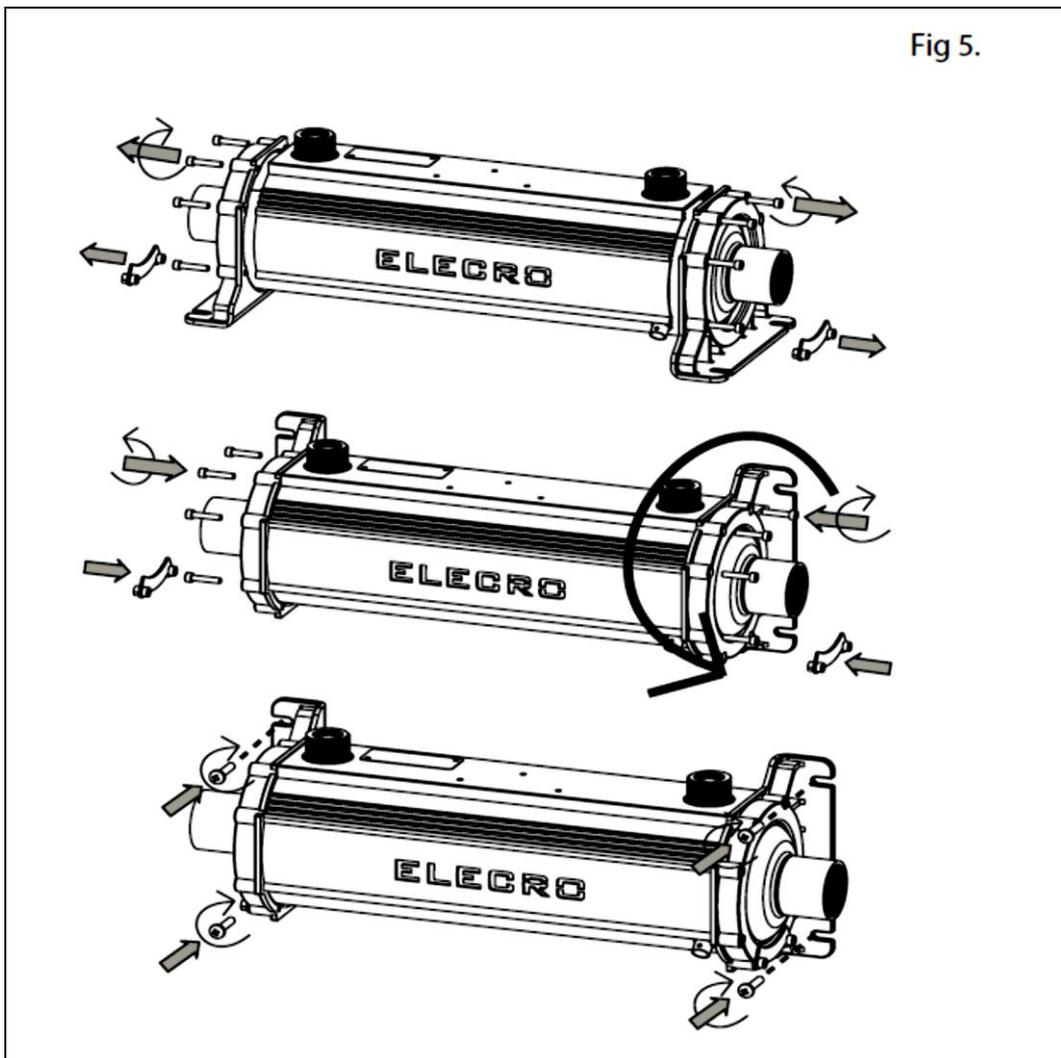
#### Vertical Installation



## Horizontal Installation



## Wall Mounting



## 2.2 Flow Direction

The Elecro Heat Exchanger should be connected to the two independent water circuits as follows:

### 1. Connection to Water Filtration Circuit (Secondary)

The Heat Exchanger should be plumbed in-line, after the filtration pump and filter and before any water treatment equipment. It must be fed with clean water. Weed/debris should not be allowed to enter the Heat Exchanger. The Heat Exchanger should be installed as close as possible to the boiler to minimise heat loss.

To assist with correct air purging and to ensure that the Heat Exchanger remains full of water during operation, it should be installed at the lowest point in the filtration circuit.

If the Heat Exchanger is installed in a vertical plain, it is essential that the pool/pond water (secondary circuit) enters low and exits high.

### 2. Connection to Heating or Cooling Circuit (Primary)

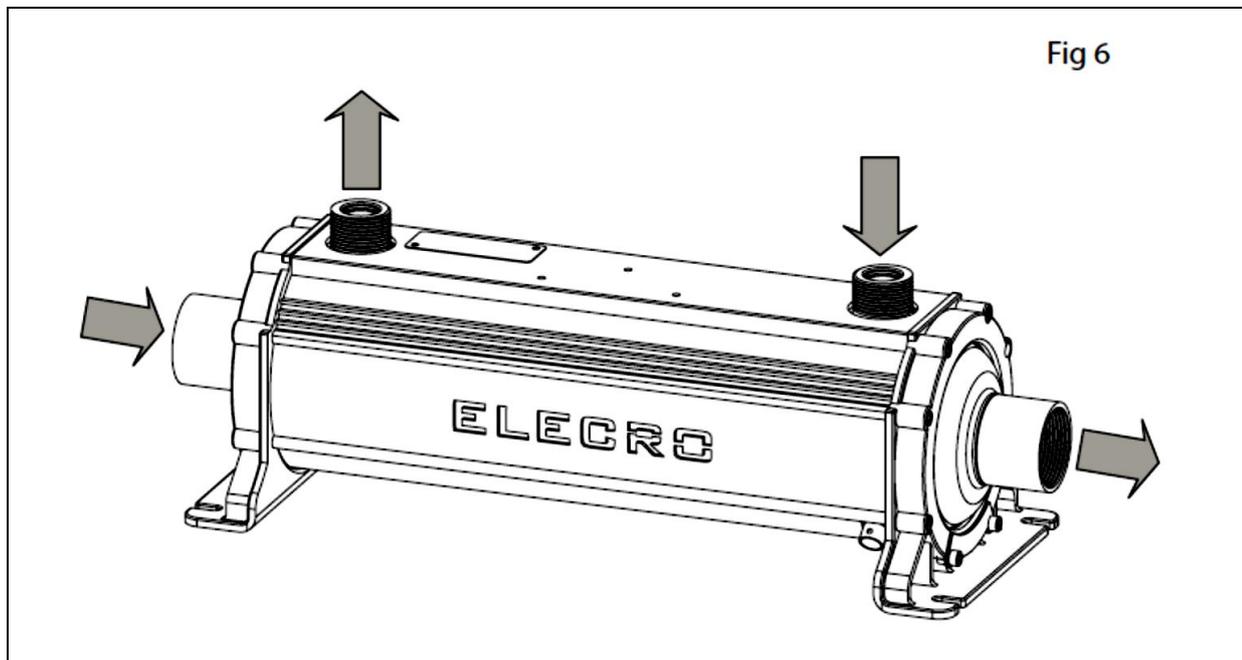
The Heat Exchanger should be connected directly to the primary heating circuit i.e. boiler via the provided 1" BSP male connectors, see diagram below.

**NOTE:** *The circulation pump of the primary circuit should be controlled by a thermostat, which should be connected via the filtration pump to allow heating only when the filtration pump is running.*

Air bleed valves should be installed at the high points of the primary circuit. To ensure correct temperature detection, it is essential that the thermostat / thermistor is positioned at the water inlet of the Heat Exchanger.

**NOTE:** *The Thermostat Control is only included with the 'Optional' fully equipped kit. The standard unit is supplied only with a Thermostat pocket.*

Care should be taken not to over tighten any connections, as this could result in damage to the Heat Exchanger.



## CIRCULATION DIRECTION

The primary and secondary circuits should be installed so water flows are counter current i.e. the water from the primary circuit should flow in the opposite direction to the water in the secondary circuit.

## **CAUTION**

If the Heat Exchanger is not used during the winter months, it must be drained to prevent frost damage.

**NOTE:** *For Winterising / maintenance, it is recommended that the Heat Exchanger is installed with isolation valves on both water input and output sides of the primary and secondary circuits. This will allow the water to be shut off on both sides and aid removal from the system, when required.*

## **3. WATER QUALITY**

To prevent damage to the Heat Exchanger, the water quality must be kept within the following limits:

- Chlorine Content: Max 3mg/l (ppm)
- Chloride Content: Max 150mg/l
- PH: 6.8-8.0
- Calcium Hardness: 200-1000mg/l (ppm)

## **4. WARRANTY**

**The Elecro Heat Exchanger is guaranteed for 2 years from the date of purchase against faulty workmanship and materials.**

- The manufacturer will replace or repair, at its discretion, any faulty units or components returned to the Company for inspection.
- Proof of purchase may be required.
- The manufacturer will not be liable in cases of incorrect installation of the Heat Exchanger inappropriate use or neglect of the Heat Exchanger



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