

## PRODUCT PROFILE

# EC160-5102-5

## Swimming Pool Heat Exchanger

### Introduction

The Bowman EC160-5102-5 is an efficient shell and tube swimming pool heat exchanger which is suitable for use with either boiler heated hot water, or renewable energy heating systems, such as heat pumps or solar collectors. It features 'Universal Fit' composite end covers, for easy installation into pool pipework and a choice of either a titanium, cupro-nickel, or stainless steel tube core.

### Typical Heat Transfer

Renewable energy: 190,000 Btu/h

### Product Benefits

**Proven** – heats pools faster, reducing energy costs

**Easy to install** – solvent weld end covers with thermostat pocket

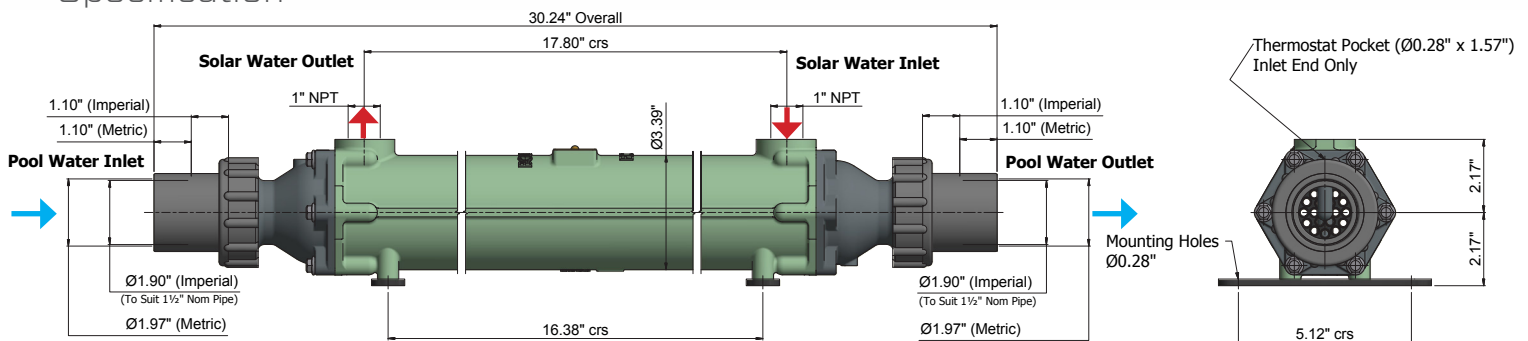
**Durability** – salt water and mineral rich fresh water compatible

**Simple to maintain** – easy disassembly for routine maintenance

**Titanium models** – full 10 year warranty on titanium materials



### Specification



All dimensions in inches (except pipe connectors)

Type	Tube Material	Typical Pool Capacity		Maximum Pool Water Flow	Maximum Hot Water Temp	Max. Operating Pressure Pool Water	Max. Operating Pressure Hot Water	Weight
		ft <sup>3</sup>	gal	USGPM	°F	psi	psi	lb
EC160-5102-5C	Cupro-nickel	4,280	32,000	66.0	230	87	87	38
EC160-5102-5S*	Stainless Steel	4,280	32,000	66.0	230	87	87	38
EC160-5102-5T	Titanium	4,280	32,000	66.0	230	87	87	33

\*Not suitable for use on pools fitted with salt water chlorinators or salt water pools.

## Water Flow

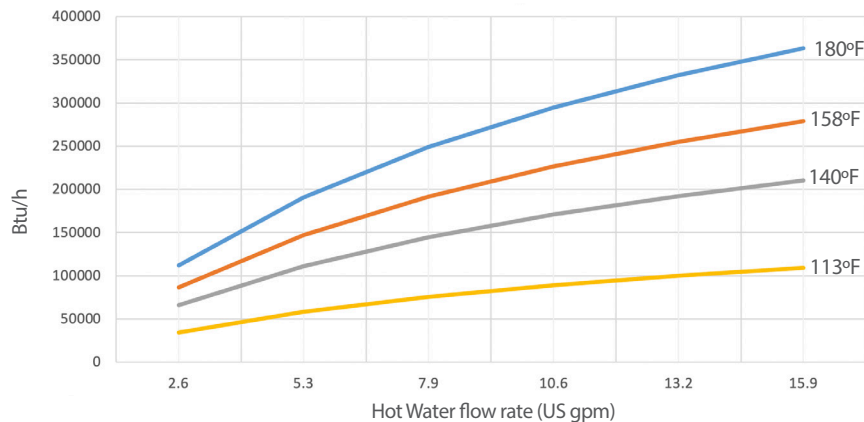
As the graphs and table below illustrate, providing the right water flow volume is vital to the performance of the heat exchanger. If the flow rate of either the hot water supply, or the pool water circuit is too low, the heat exchanger will not perform at its designed efficiency and will be unable to transfer all the available heat energy in to the pool water.

For more information please visit; <https://ej-bowman.com/knowledge-centre/why-doesn't-my-pool-heat-up-faster/>

## Heat Transfer

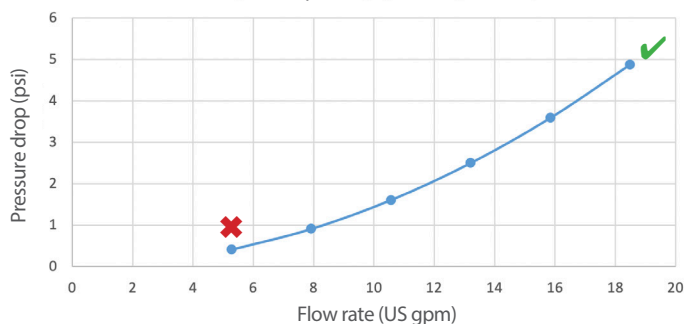
Btu/h Heat Transfer - EC160-5102-5

Pool water flow 66 US gpm at 82°F

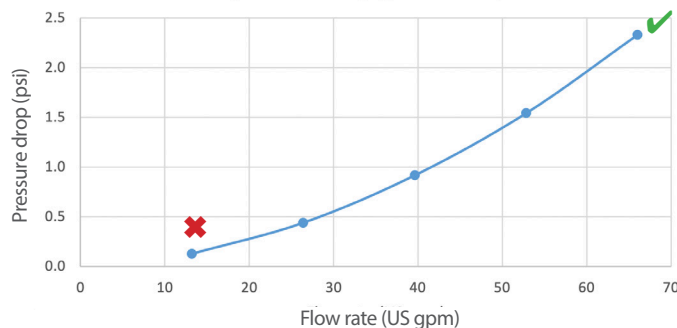


Hot Water	Temperature & Heat Transfer			
Flow rate (US GPM)	180°F Btu/h	158°F Btu/h	140°F Btu/h	113°F Btu/h
2.6	111900	86700	65900	34500
5.3	190700	147100	111200	58300
7.9	249100	191800	144700	75400
10.6	294800	226900	170900	89100
13.2	332300	255200	192100	100000
15.9	363400	279100	210200	109200

### Pressure Drop Hot Water (Shell Side)



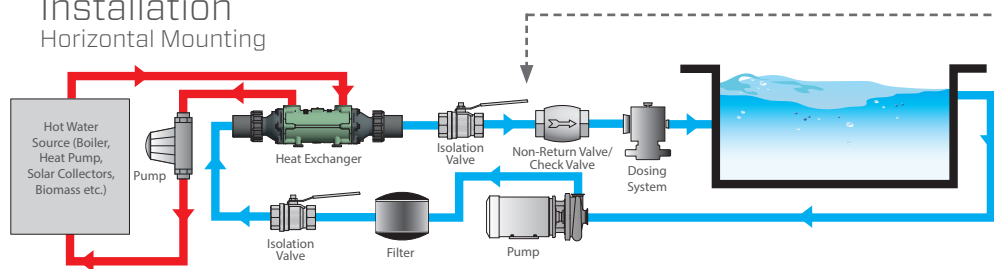
### Pressure Drop Pool Water (Tube Side)



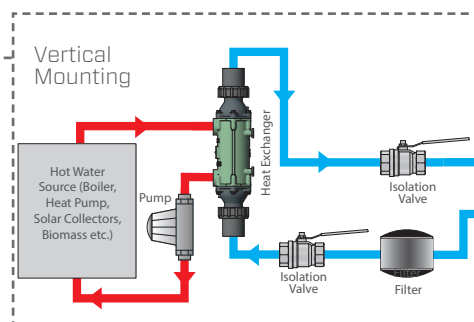
✓ Optimum heat transfer performance ✗ Reduced heat transfer performance

## Installation

### Horizontal Mounting



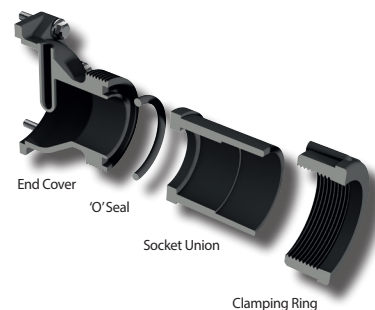
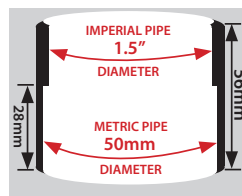
### Vertical Mounting



If an automatic dosing system is added, it must be installed after the heat exchanger on the return to the pool.

## Universal Fit End Covers

The EC160-5102-5 is supplied with 'Universal Fit' composite end covers, designed for use with either 1.5" nominal pipe size (48mm O/D) or metric 50mm O/D pool pipework. The 'socket union' component enables either diameter to be accommodated, as shown on the adjacent cross section illustration.



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