

## PRODUCT PROFILE

# FC160-5114-5

## Swimming Pool Heat Exchanger

### Introduction

The Bowman FC160-5114-5 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 is easily installed into pool pipework, has an integral thermostat pocket and is available with either a titanium, cupro-nickel, or stainless steel tube core.

### Typical Heat Transfer

Renewable energy: 96kW



### Product Benefits

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

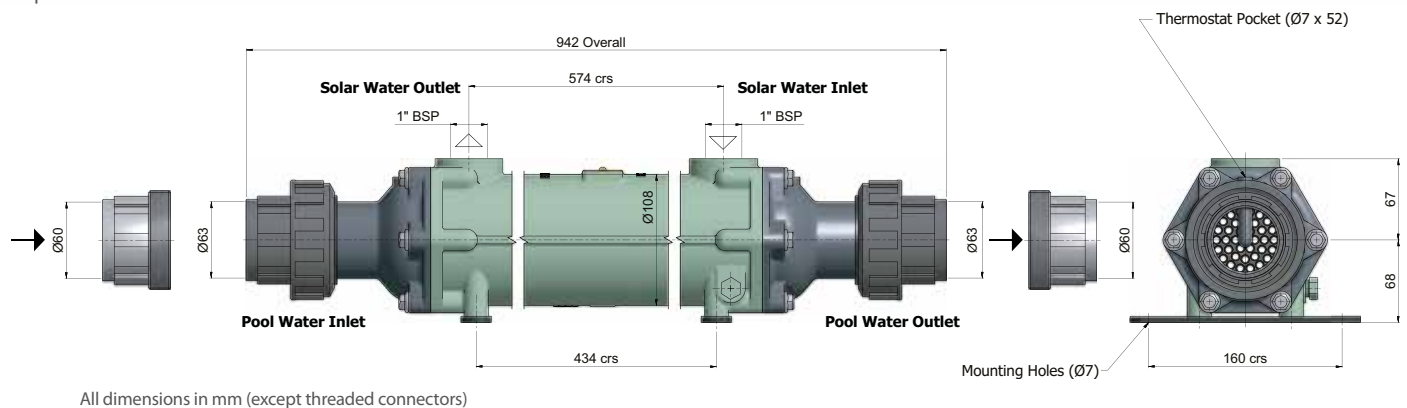
**Easy to install** – solvent weld end covers with thermostat pocket

**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



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
		m <sup>3</sup>	gal	m <sup>3</sup> /h	l/min	°C	°F	bar	psi	bar	psi	
FC160-5114-5C	Cupro-nickel	200	44,000	23.0	350	110	230	6	87	6	87	17
FC160-5114-5S*	Stainless Steel	200	44,000	23.0	380	110	230	6	87	6	87	17
FC160-5114-5T	Titanium	200	44,000	23.0	380	110	230	6	87	6	87	15

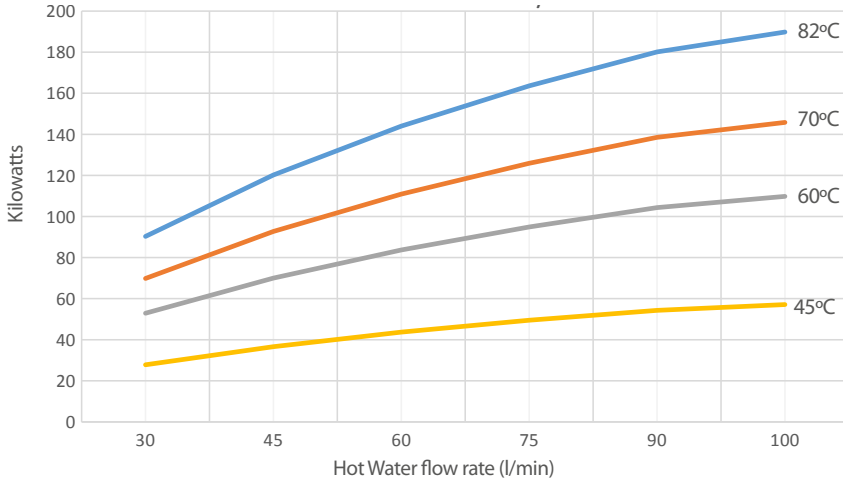
\*Not suitable for use on pools fitted with salt water chlorinators or salt water pools.

# 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/>

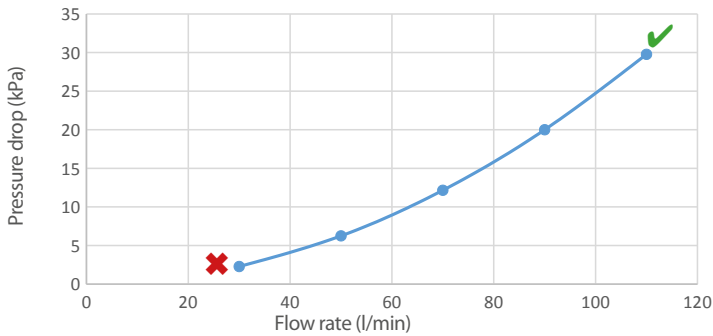
## Heat Transfer



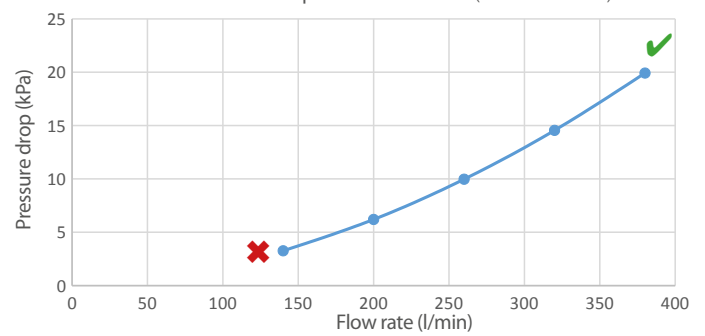
kW Heat Transfer - FC160-5114-5  
Pool water flow 350 l/min at 28°C

Hot Water	Temperature & Heat Transfer			
Flow rate	82°C	70°C	60°C	45°C
l/min	kW	kW	kW	kW
30	90	70	53	28
45	120	93	70	37
60	144	111	84	44
75	164	126	95	50
90	180	139	104	54
100	190	146	110	57

## Pressure Drop Hot Water (Shell Side)



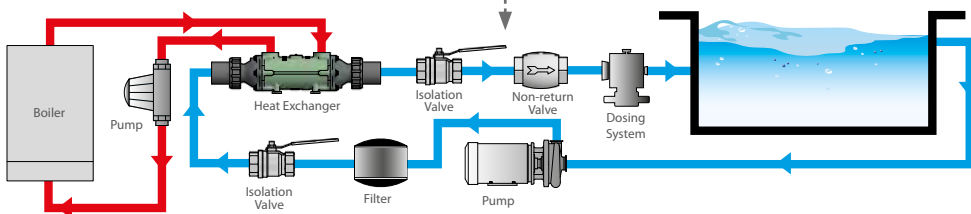
## Pressure Drop Pool Water (Tube Side)



✓ Optimum heat transfer performance ✗ Reduced heat transfer performance

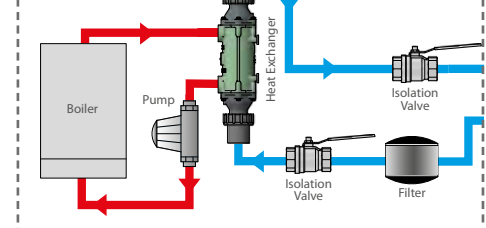
## Installation

### Horizontal Mounting



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

### Vertical Mounting



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