

## PRODUCT PROFILE

# FC100-5103-2

## Swimming Pool Heat Exchanger

### Introduction

The Bowman FC100-5103-2 is an efficient shell and tube heat exchanger which is suitable for heating swimming pools up to 6,400 ft<sup>3</sup>, via a boiler heat source. It is easily installed into the pool pipework, has an integral thermostat pocket and is available with either a titanium, cupro-nickel, or stainless steel tube core.

### Typical Heat Transfer

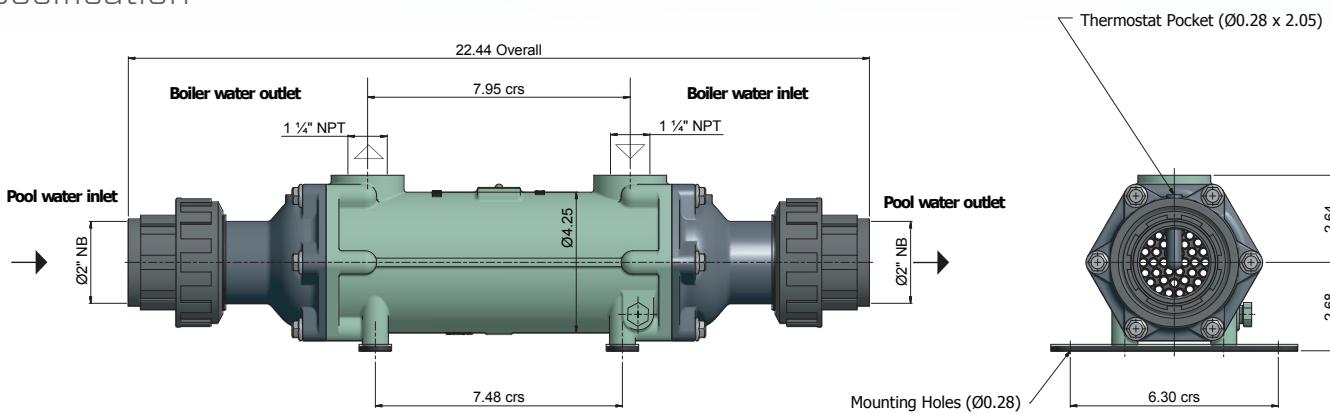
Boiler heating – 340,000 Btu/h



### 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



All dimensions in inches

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
FC100-5103-2C	Cupro-nickel	6,000	44,500	93.0	230	87	87	19
FC100-5103-2S*	Stainless Steel	6,400	48,000	100.0	230	87	87	19
FC100-5103-2T	Titanium	6,400	48,000	100.0	230	87	87	17

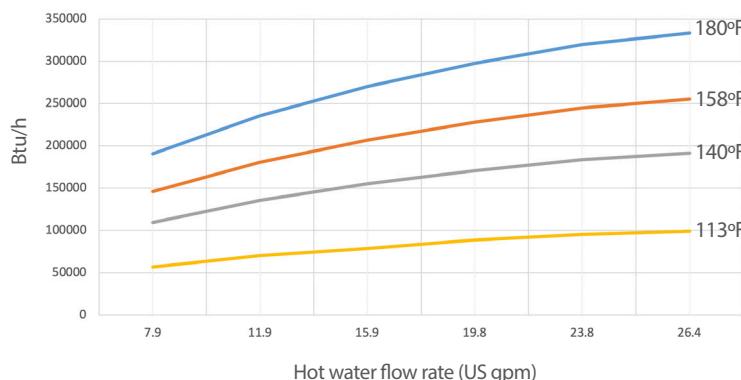
\*Not suitable for use on pools fitted with salt water chlorinators or salt water pools.

## 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/>

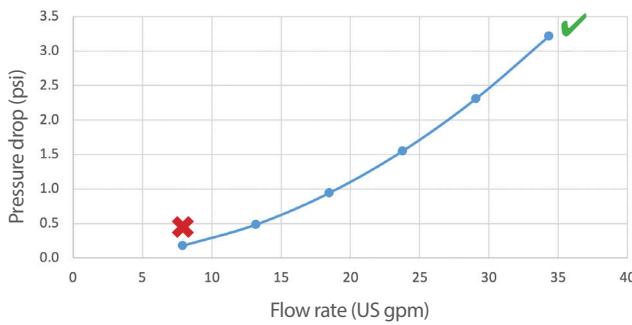
## Heat Transfer



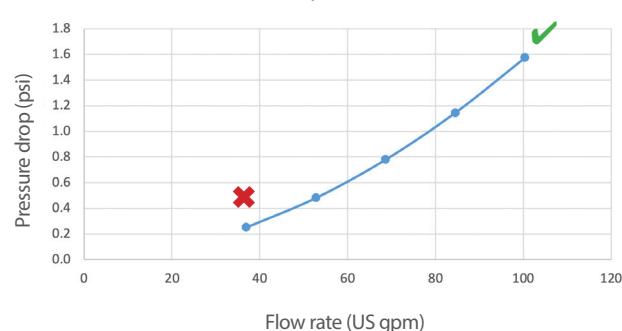
Btu/h Heat Transfer - FC100-5103-2  
Pool water flow 93 US gpm at 82°F

Hot Water (US GPM)	Temperature & Heat Transfer			
	180°F Btu/h	158°F Btu/h	140°F Btu/h	113°F Btu/h
7.9	190400	145700	109500	56600
11.9	235400	180500	135500	69900
15.9	269900	206400	154900	78500
19.8	297200	227600	170600	88400
23.8	319700	244700	183600	94900
26.4	333000	254900	191100	99000

### Pressure Drop Hot Water (Shell Side)

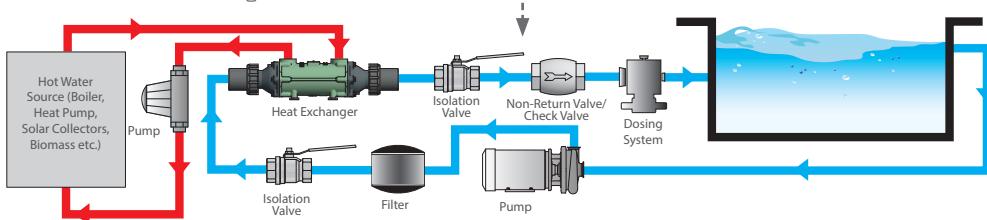


### Pressure Drop Pool Water (Tube Side)

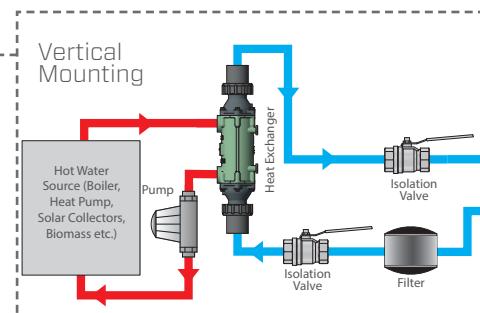


✓ Optimum heat transfer performance    ✗ Reduced heat transfer performance

### Installation Horizontal Mounting



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



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