

PRODUCT PROFILE

FC160-5103-5

Swimming Pool Heat Exchanger

Introduction

The Bowman FC160-5103-5 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: 325,000 Btu/h



Product Benefits

Proven – heats pools fast, reducing energy costs

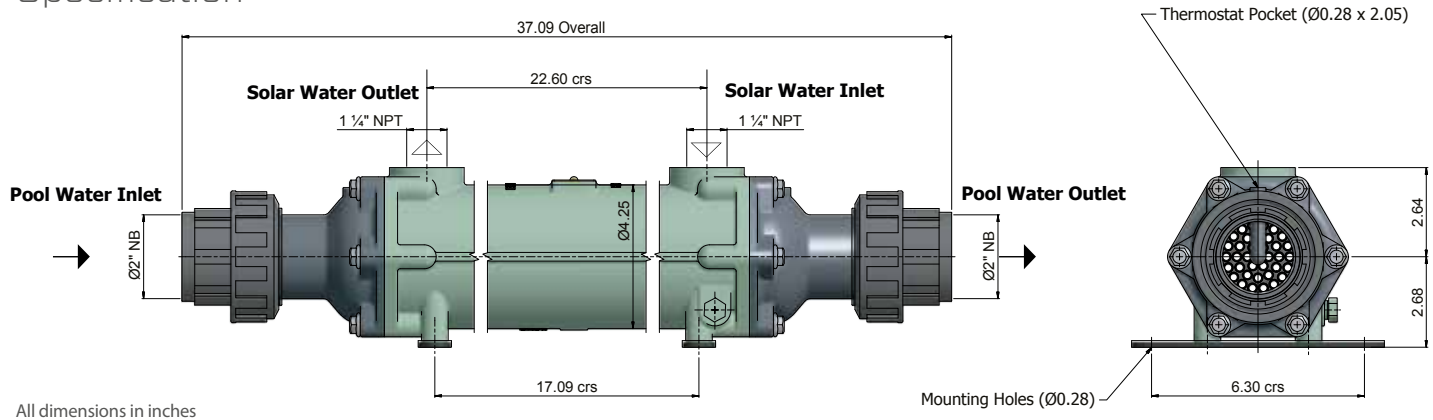
Easy to install – solvent weld end covers with thermostat pocket

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



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 ³	gal	USGPM	°F	psi	psi	lb
FC160-5103-5C	Cupro-nickel	7,000	52,400	93	230	87	87	38
FC160-5103-5S*	Stainless Steel	7,000	52,400	100	230	87	87	38
FC160-5103-5T	Titanium	7,000	52,400	100	230	87	87	33

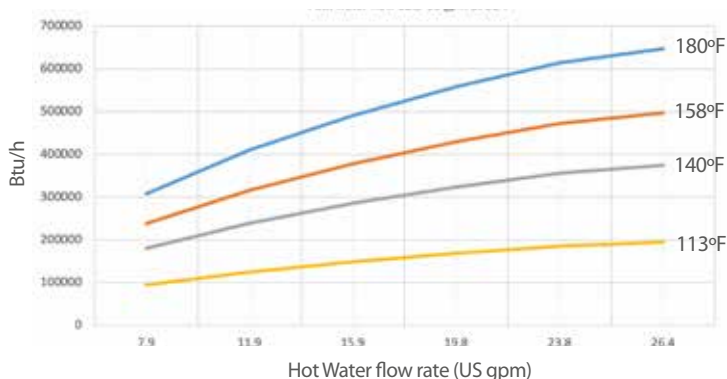
*Not suitable for use on pools fitted with salt water chlorinators or salt water pools.

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

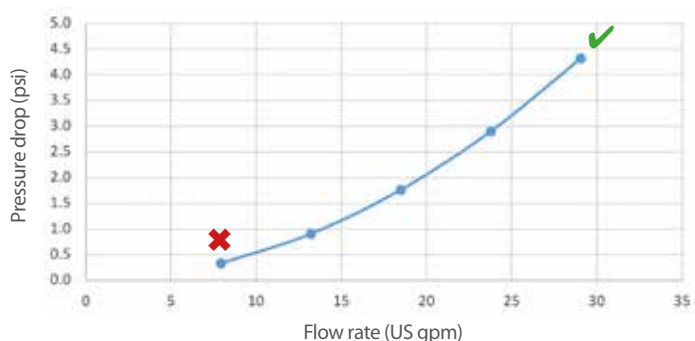


Btu/h Heat Transfer - FC160-5103-5

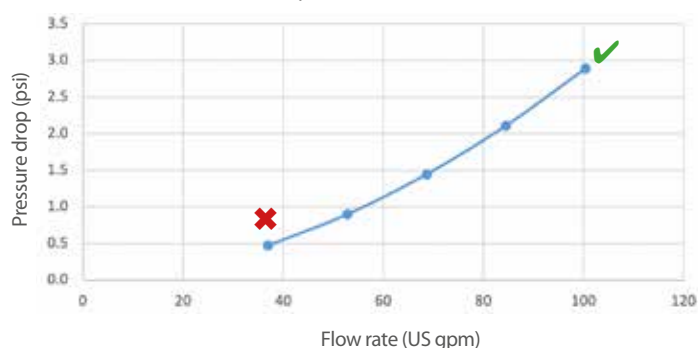
Pool water flow 93 US gpm at 82°F

Hot Water	Temperature & Heat Transfer			
Flow rate	180°F	158°F	140°F	113°F
(US GPM)	Btu/h	Btu/h	Btu/h	Btu/h
7.9	308100	238200	180500	94900
11.9	410100	316300	238800	124900
15.9	491300	378400	285600	149100
19.8	558200	429600	323800	168900
23.8	614500	472600	355900	185300
26.4	647600	497500	374700	194800

Pressure Drop Hot Water (Shell Side)



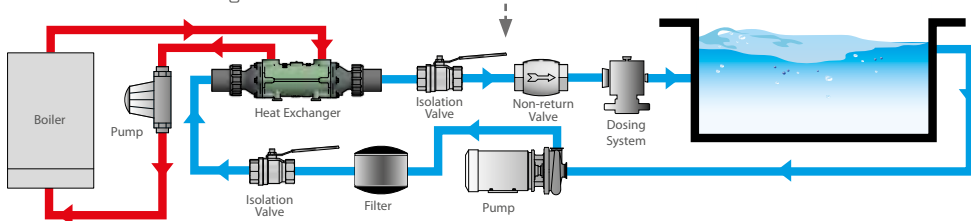
Pressure Drop Pool Water (Tube Side)



✓ Optimum heat transfer performance ✗ Reduced heat transfer performance

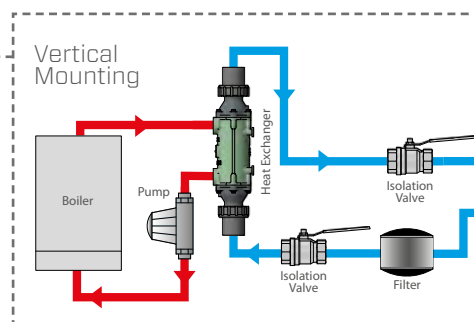
Installation

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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