

PRODUCT PROFILE

EC100-5102-2

Swimming Pool Heat Exchanger

Introduction

The Bowman EC100-5102-2 is an extremely versatile heat exchanger which is suitable for use with both larger spas and hot tubs, or domestic swimming pools up to 3,200ft³ via a boiler heat source. It features 'Universal Fit' composite end covers, for easy installation into pool or spa pipework and a choice of either a titanium, cupro-nickel, or stainless steel tube core.

Typical Heat Transfer

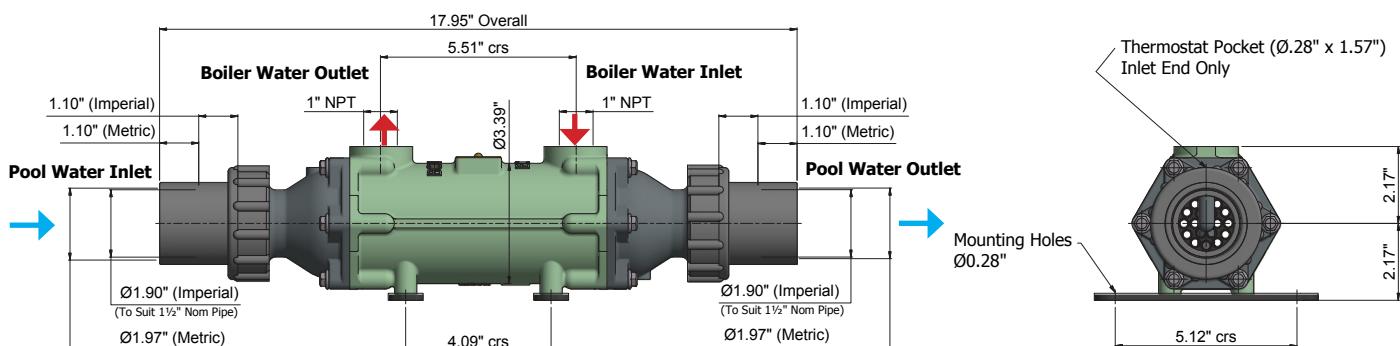
Boiler heating – 150,000 Btu/h



Product Benefits

Proven – heats spas and hot tubs extremely 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					
EC100-5102-2C	Cupro-nickel	2,900	22,000	45.0	230	87	87	10
EC100-5102-2S*	Stainless Steel	3,200	24,000	53.0	230	87	87	10
EC100-5102-2T	Titanium	3,200	24,000	53.0	230	87	87	9

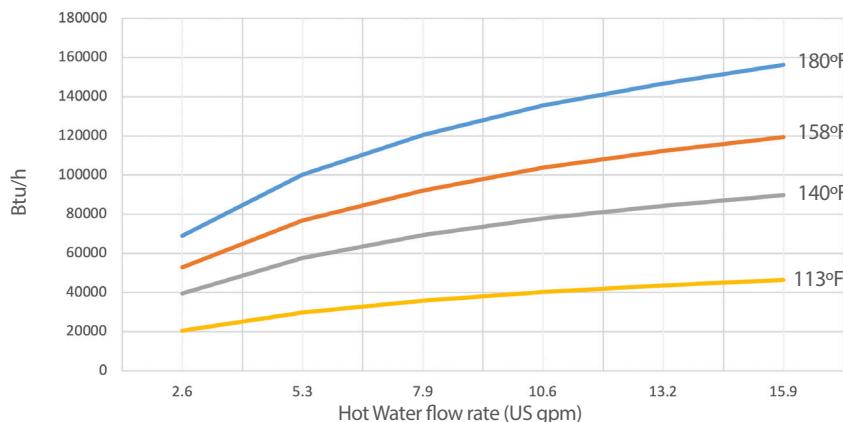
*Not suitable for use on pools fitted with salt water chlorinators or salt water pools.

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/>

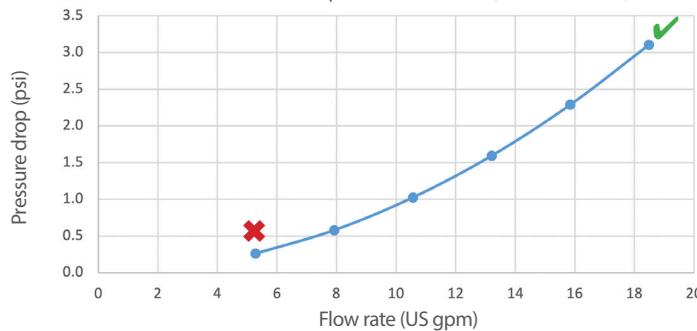
Heat Transfer



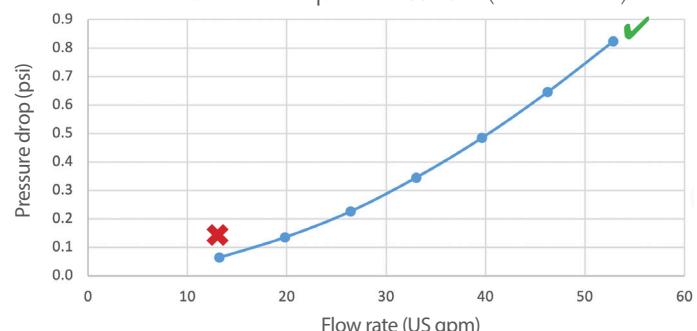
Btu/h Heat Transfer - EC100-5102-2
Pool water flow 52.8 US gpm at 82°F

Hot Water	Temperature & Heat Transfer			
	Flow rate (US GPM)	180°F Btu/h	158°F Btu/h	140°F Btu/h
2.6	68900	52900	39600	20500
5.3	100300	76800	57700	29700
7.9	120400	92100	69300	35800
10.6	135500	103700	77800	40300
13.2	146700	112300	84300	43700
15.9	156300	119400	89700	46400

Pressure Drop Hot Water (Shell Side)



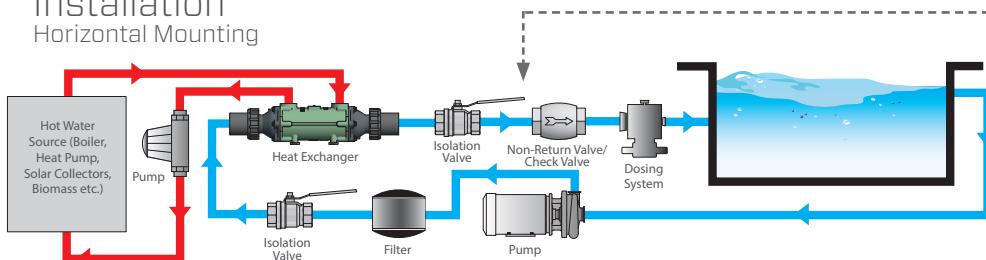
Pressure Drop Pool Water (Tube Side)



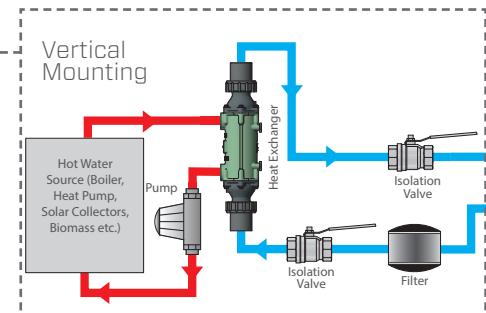
✓ Optimum heat transfer performance ✗ Reduced heat transfer performance

Installation

Horizontal Mounting

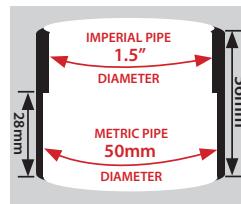


If an automatic dosing system is added, it must be installed after the heat exchanger on the return to the pool.



Universal Fit End Covers

The EC100-5102-2 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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