

PRODUCT PROFILE

EC80-5113-1

Swimming Pool Heat Exchanger

Introduction

The Bowman EC80-5113-1 is a compact, yet highly efficient heat exchanger, that is designed for heating spas, hot tubs and domestic swimming pools up to 50 m³, 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

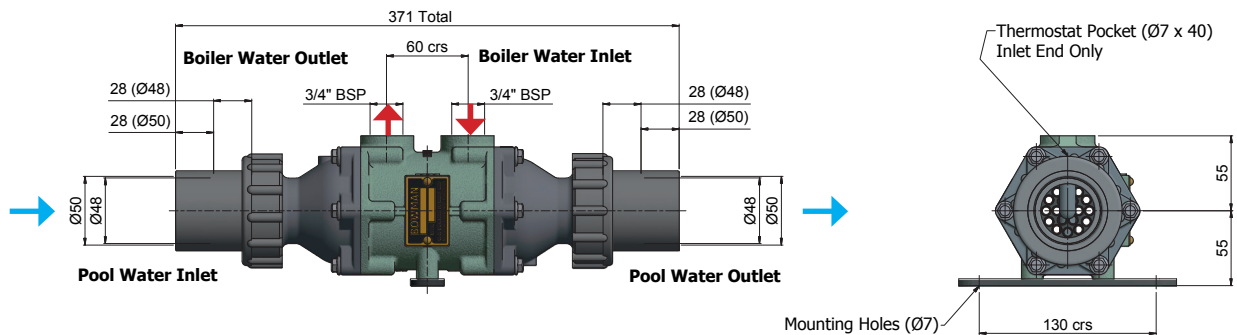
Boiler heating: 25kW



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



All dimensions in mm (except threaded 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
		m ³	gal	m ³ /h	l/min	°C	°F	bar	psi	bar	psi	
EC80-5113-1C	Cupro-nickel	40	8,800	9.0	150	110	230	6	87	6	87	3.0
EC80-5113-1S*	Stainless Steel	50	11,000	12.0	200	110	230	6	87	6	87	3.0
EC80-5113-1T	Titanium	50	11,000	12.0	200	110	230	6	87	6	87	2.7

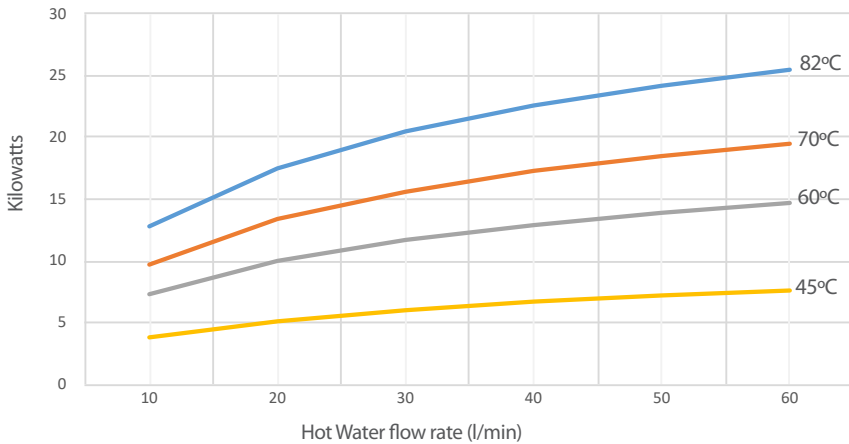
*Not suitable for use on pools fitted with salt water chlorinators or salt water pools.

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/>

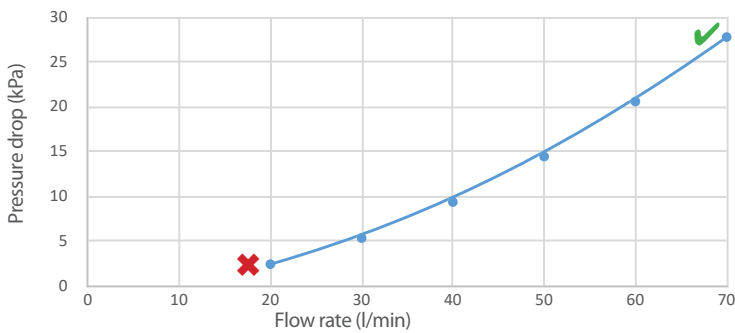
Heat Transfer



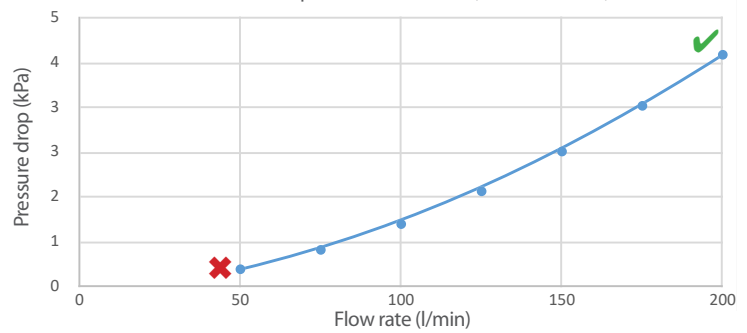
kW Heat Transfer - EC80-5113-1
Pool water flow 200 l/min at 28°C

Hot Water	Temperature & Heat Transfer			
Flow rate l/min	82°C kW	70°C kW	60°C kW	45°C kW
10	13	10	7	4
20	18	13	10	5
30	21	16	12	6
40	23	17	13	7
50	24	19	14	7
60	26	20	15	8

Pressure Drop Hot Water (Shell Side)



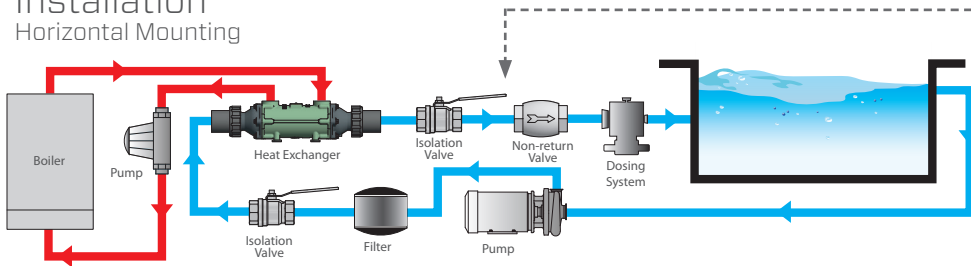
Pressure Drop Pool Water (Tube Side)



✓ Optimum heat transfer performance ✗ Reduced heat transfer performance

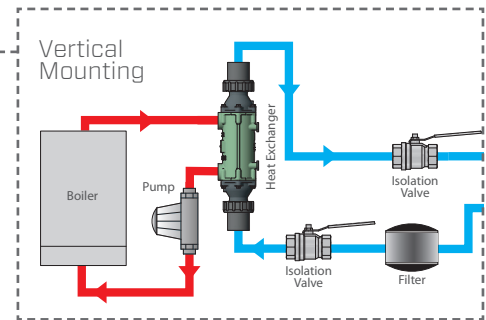
Installation

Horizontal Mounting



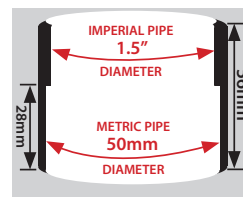
If an automatic dosing system is added, it must be installed after the heat exchanger on the return to the pool.

Vertical Mounting



Universal Fit End Covers

The EC80-5113-1 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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