

PRODUCT PROFILE

EC100-5113-2

Swimming Pool Heat Exchanger

Introduction

The Bowman EC100-5113-2 is an extremely versatile heat exchanger which is suitable for use with both larger spas and hot tubs, or domestic swimming pools up to 90 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 – 50kW

Product Benefits

Proven – heats spas and hot tubs extremely fast, reducing energy costs

Easy to install – solvent weld end covers with thermostat pocket

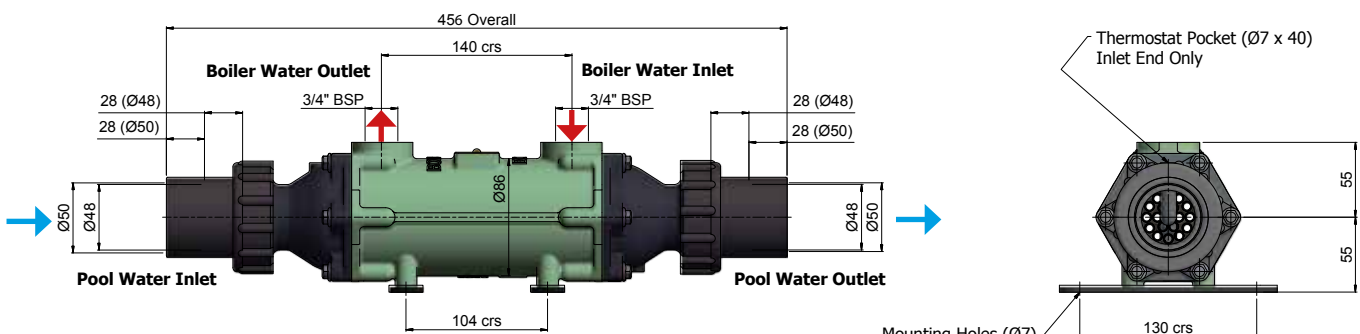
Durability – salt water and mineral rich fresh water compatible

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 | |
| EC100-5113-2C | Cupro-nickel | 80 | 18,000 | 10.2 | 200 | 110 | 230 | 6 | 87 | 6 | 87 | 4.5 |
| EC100-5113-2S* | Stainless Steel | 90 | 20,000 | 12.0 | 250 | 110 | 230 | 6 | 87 | 6 | 87 | 4.5 |
| EC100-5113-2T | Titanium | 90 | 20,000 | 12.0 | 250 | 110 | 230 | 6 | 87 | 6 | 87 | 4.0 |

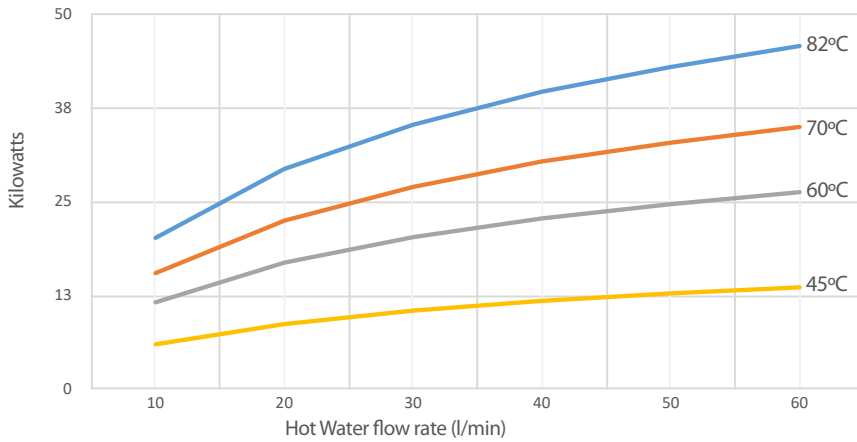
*Not suitable for use on pools fitted with salt water chlorinators or salt water pools.

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/>

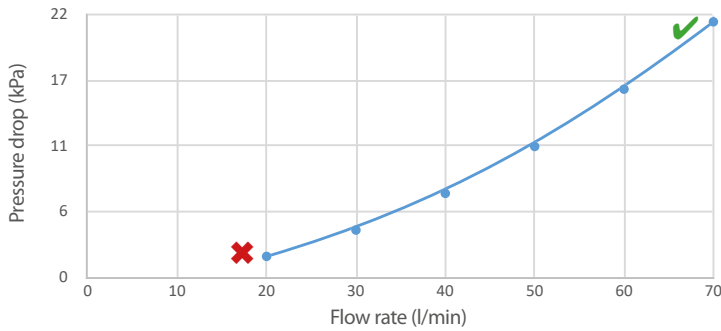
Heat Transfer



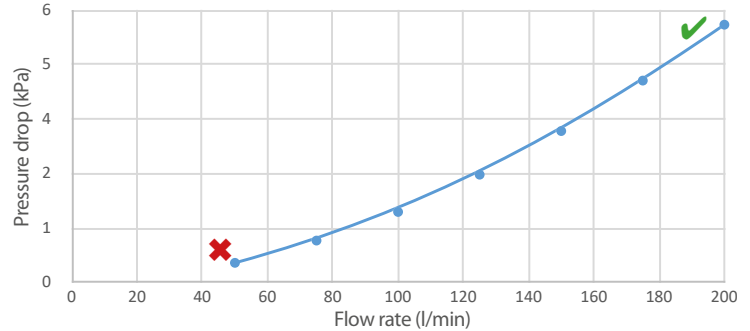
kW Heat Transfer - EC100-5113-2
Pool water flow 250 l/min at 28°C

| Hot Water | Temperature & Heat Transfer | | | |
|-----------|-----------------------------|------|------|------|
| Flow rate | 82°C | 70°C | 60°C | 45°C |
| l/min | kW | kW | kW | kW |
| 10 | 20 | 16 | 12 | 6 |
| 20 | 29 | 23 | 17 | 9 |
| 30 | 35 | 27 | 20 | 11 |
| 40 | 42 | 30 | 23 | 12 |
| 50 | 46 | 33 | 25 | 13 |
| 60 | 50 | 35 | 26 | 14 |

Pressure Drop Hot Water (Shell Side)

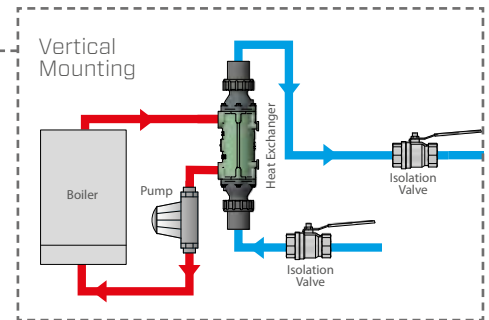
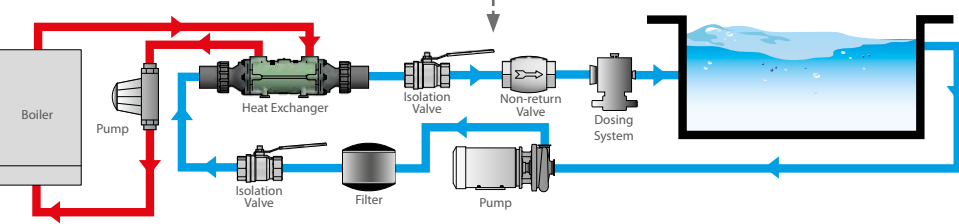


Pressure Drop Pool Water (Tube Side)



✓ Optimum heat transfer performance ✗ Reduced heat transfer performance

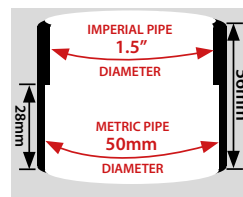
Installation



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 EC100-5113-2 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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