

PRODUCT PROFILE

PK190-5111-3

Swimming Pool Heat Exchanger

Introduction

The Bowman PK190-5111-3 is a highly efficient shell and tube heat exchanger, which is designed for heating the largest size commercial swimming pools, up to 59,300 ft³ via a boiler heat source.

The cast end covers are finished in 'C' coat, an advanced technology coating, which is highly corrosion resistant for durability and the unit is available with either a titanium or cupro-nickel tube core.

Typical Heat Transfer

Boiler heating – up to 3,849,900 Btu/h

Product Benefits

Performance – heats pools fast, reducing energy costs

Proven – designed for the largest commercial leisure or sports pools

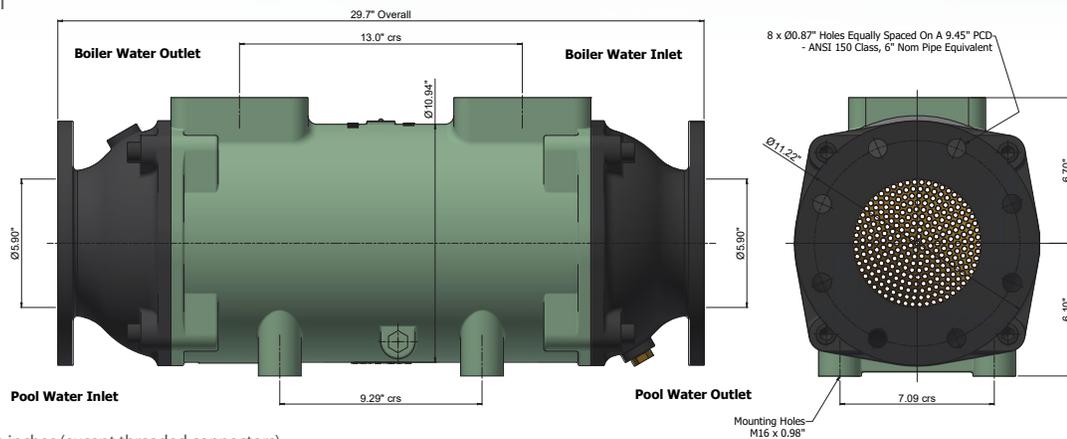
Durability – salt water and mineral rich fresh water compatible

Simple to maintain – easy disassembly for cleaning

Titanium models – full 10 year warranty on titanium models



Specification



All dimensions in inches (except threaded connectors)

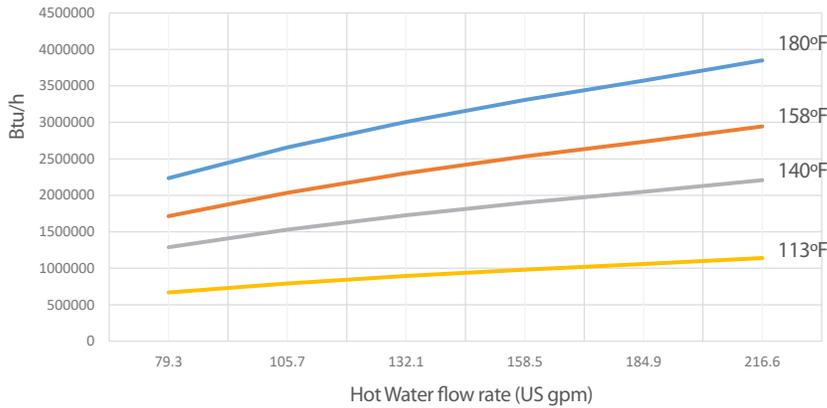
Type	Tube Material	Typical Pool Capacity		Maximum Pool Water Flow	Maximum Hot Water Temp	Max. Operating Pressure Pool Water	Max. Operating Pressure Hot Water	Weight
		ft ³	US gal	USGPM	°F	psi	psi	
PK190-5111-3	Cupro-nickel	53,000	396,000	770.0	230	87	87	264
PK190-5111-3T	Titanium	59,300	444,000	950.0	230	87	87	233

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/>

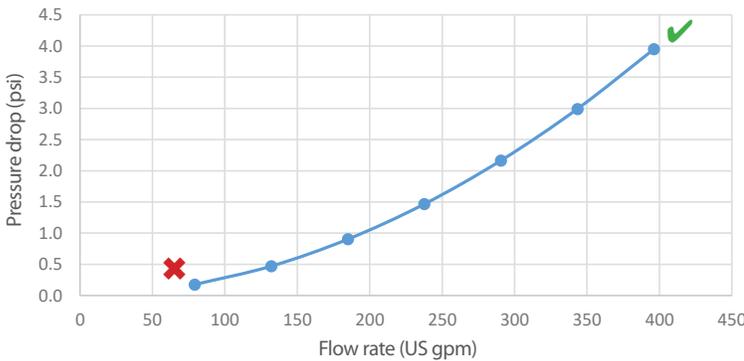
Heat Transfer



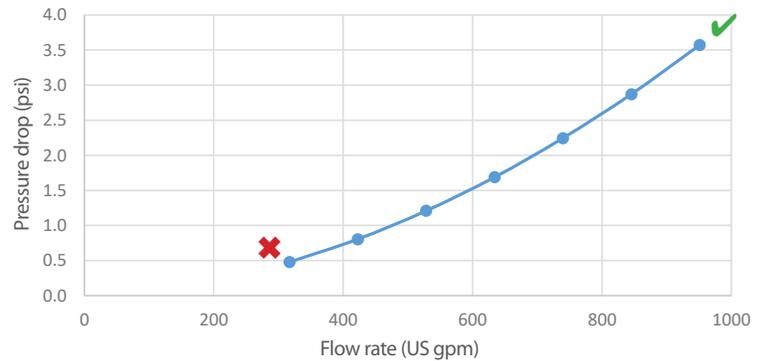
Btu/h Heat Transfer - PK190-5111-3
Pool water flow 766.1 US gpm at 82°F

Hot Water	Temperature & Heat Transfer			
Flow rate (US gpm)	180°F Btu/h	158°F Btu/h	140°F Btu/h	113°F Btu/h
79.3	2235600	1714600	1288400	668100
105.7	2655300	2034700	1527600	790900
132.1	3006800	2302500	1727900	893600
158.5	3308400	2532100	1899500	981700
184.9	3572500	2733500	2049700	1058800
216.6	3849900	2945000	2207800	1140000

Pressure Drop Hot Water (Shell Side)



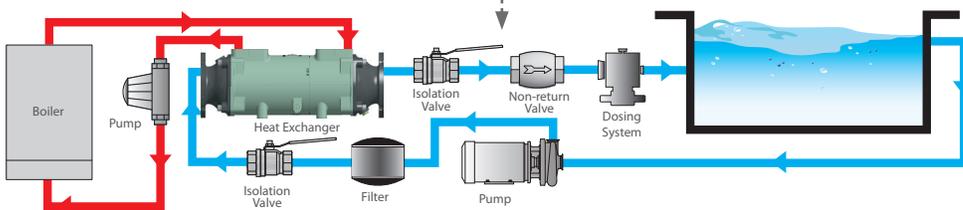
Pressure Drop Pool Water (Tube Side)



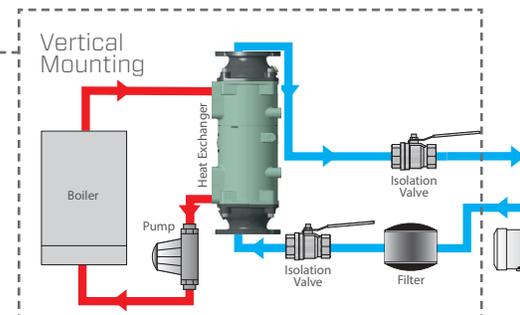
✓ Optimum heat transfer performance ✗ Reduced heat transfer performance

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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