

PRODUCT PROFILE

GK190-5109-3

Swimming Pool Heat Exchanger

Introduction

The Bowman GK190-5109-3 is an efficient shell and tube heat exchanger which is suitable for heating larger sized swimming pools up to 26,500 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 – 2,000,000 Btu/h

Product Benefits

Proven – heats pools fast, reducing energy costs

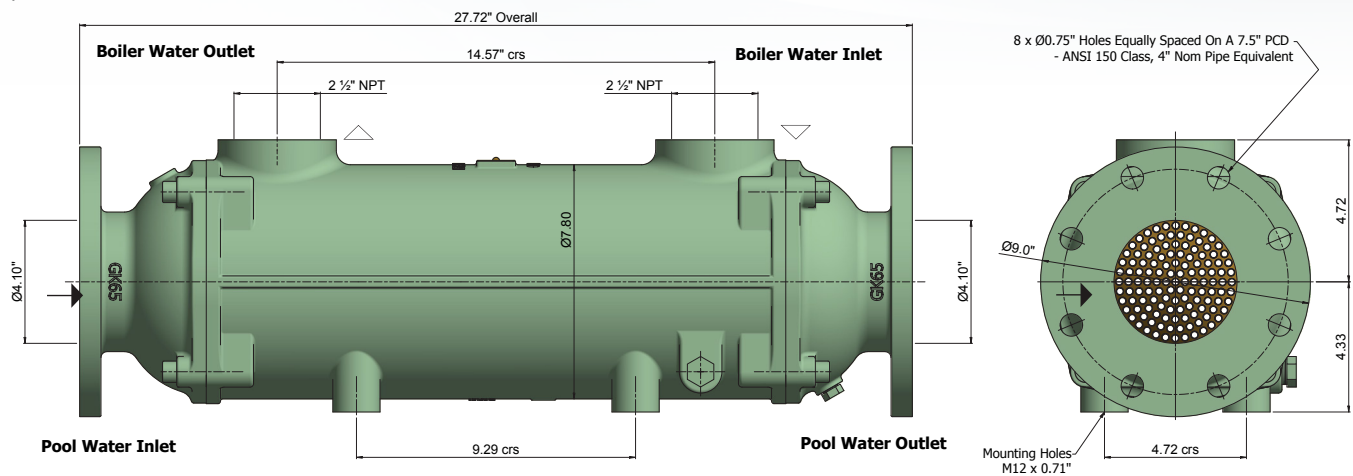
Performance – designed for larger commercial and sports pools

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 inches

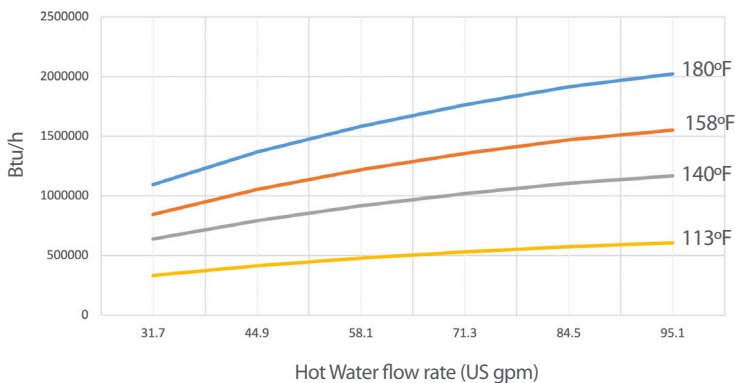
Type	Tube Material	Typical Pool Capacity		Maximum Pool Water Flow	Maximum Hot Water Temp	Max. Operating Pressure Pool Water	Max. Operating Pressure Hot Water	Weight
		ft ³	gal	USGPM	°F	psi	psi	lb
GK190-5109-3C	Cupro-nickel	23,300	174,000	330.0	230	87	87	125
GK190-5109-3T	Titanium	26,500	198,000	425.0	230	87	87	112

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/>

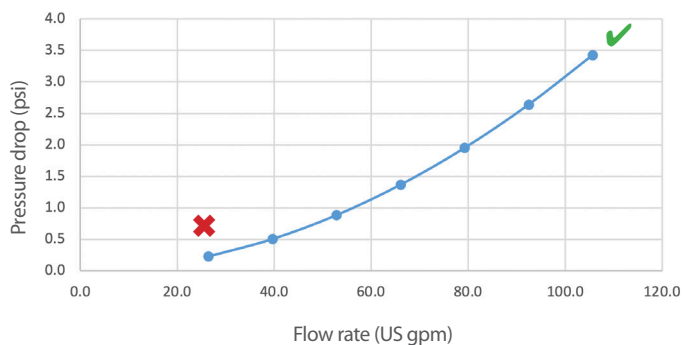
Heat Transfer



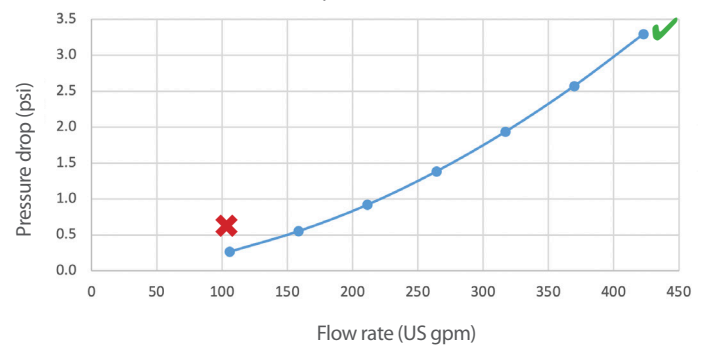
Btu/h Heat Transfer - GK190-5109-3
Pool water flow 330 US gpm at 82°F

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
31.7	1096000	845200	638100	333700
44.9	1367600	1052600	793700	414200
58.1	1584600	1218500	917900	478000
71.3	1763700	1355300	1020600	530900
84.5	1915600	1471000	1106900	575600
95.1	2021400	1551500	1167300	606700

Pressure Drop Hot Water (Shell Side)



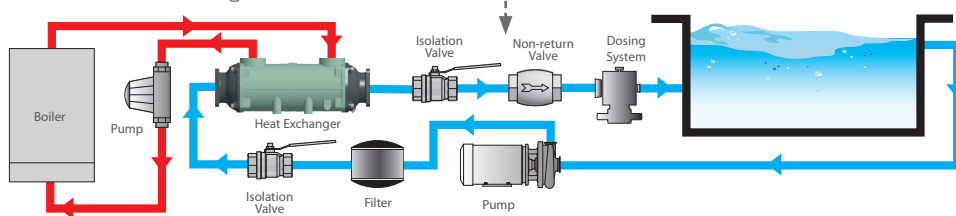
Pressure Drop Pool Water (Tube Side)



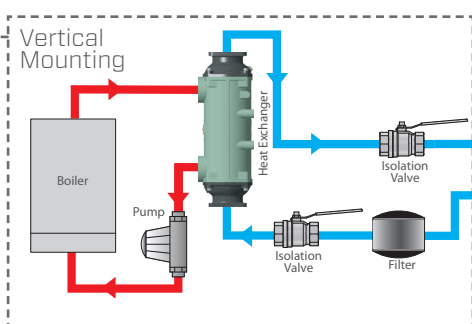
✓ Optimum heat transfer performance ✗ Reduced heat transfer performance

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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