

**h** hidrotermal<sup>®</sup>

**HEAT EXCHANGER**



**USER MANUAL**



[www.hidro-termal.com](http://www.hidro-termal.com)

## How to choose the heat exchanger:

1. First of all, determine the water heating speed. Usually, the heating requirement for long-term opened pool in the summer is 1 °F per hour (1 °F = 0.56 °C) and for the short-term using pool is 20°F per hour;
2. Calculate the volume of pool;
3. According to the below table select the model of exchanger basic on the pool size and water heating speed. Need to make sure the output power of boiler can achieve the table requirement;
4. How to calculate the rate of heat loss, ensure the boiler output power is larger than the result of the following formula:

$$\text{Heat Loss (btu/hr)} = 233.28 \times S(\text{m}^2) \times T_{\text{diff}}$$

S (m<sup>2</sup>): the surface area of swimming pool in m<sup>2</sup>

T<sub>diff</sub>: the pool desired temperature °C - the average lowest temperature °C

Remark: Generally the desired water temperature of pool is 26 °C.

The Volume of Pool (m <sup>3</sup> )	Temperature Rise in °F/hour		Water Heating Speed 1°F/hour	
	Required Boiler (btu/hr)	Model of Heat Exchanger	Required Boiler (btu/hr)	Model of Heat Exchanger
8	16.683	Hidro-HE24	33366	Hidro-HE24
15	33.366	Hidro-HE24	66732	Hidro-HE24
23	50.049	Hidro-HE24	100098	Hidro-HE40
30	66.732	Hidro-HE24	133464	Hidro-HE40
38	83.415	Hidro-HE24	166830	Hidro-HE60
45	100.098	Hidro-HE40	200196	Hidro-HE75
53	116.781	Hidro-HE40	233562	Hidro-HE75
61	133.464	Hidro-HE40	266928	Hidro-HE120
68	150.147	Hidro-HE60	300294	Hidro-HE120
76	166.830	Hidro-HE60	333660	Hidro-HE120
83	183.513	Hidro-HE60	368026	Hidro-HE120
91	200196	Hidro-HE75	400392	Hidro-HE75(2)
98	246879	Hidro-HE75	433758	Hidro-HE75(2)
106	233562	Hidro-HE75	467124	Hidro-HE75(2)
114	250245	Hidro-HE75	500490	Hidro-HE75(2)
121	266928	Hidro-HE120	533856	Hidro-HE120(2)
129	283611	Hidro-HE120	567222	Hidro-HE120(2)
136	300294	Hidro-HE120	600588	Hidro-HE120(2)
144	316977	Hidro-HE120	633954	Hidro-HE120(2)
151	333660	Hidro-HE120	667920	Hidro-HE120(2)
159	350343	Hidro-HE120	700686	Hidro-HE120(2)
167	367026	Hidro-HE120	734052	Hidro-HE120(2)
174	388709	Hidro-HE120	767418	Hidro-HE120(2)

The heat exchanger's purpose is to continually transfer the heat from one medium to another, in order to carry process energy.

hidrotermal® Heat Exchangers are able to produce a high output and perform an excellent heat transfer capability. All *models can* be installed and connected to multiple kinds of boilers, heat pumps and solar panel systems.

### Features

- Five sizes: 24, 40, 60, 75, 120 kW, suitable for swimming pools of up to 450m<sup>3</sup>
- Black colour external coating or Shiny Stainless Steel exterior are available.

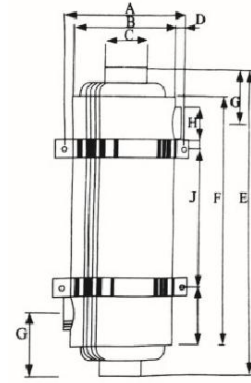




Black Coated Finishing



Stainless Steel Finishing



Model No.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H	J (mm)	Weight kg
Hidro-HE24	139.7	130.2	25.4	6.4	275	211	76.2	1-1/2"	33	2.72
Hidro-HE40	139.7	130.2	25.4	6.4	342.9	279.4	76.2	1-1/2"	101.6	1.65
Hidro-HE60	139.7	130.2	25.4	6.4	476.3	406.4	76.2	1-1/2"	228.6	2.27
Hidro-HE75	139.7	130.2	25.4	6.4	603.3	539.8	76.2	1-1/2"	355.6	2.88
hidro-HE120	139.7	130.2	25.4	6.4	1060.5	1000	88.9	2"	800.1	4.94

Model No.	Thermal Output			Hot Water Flow		Cold water Flow		Heat Exchange Surface	
	Btu/hr.	Kw	Kca/hr.	Ft	L/min	Ft	L/min	Sq-ft	M2
Hidro-HE24	95k	25	20	1.8	30	0.3	25	2	0.2
Hidro-HE40	135k	40	34	1.0	25	2.7	200	3.2	0.3
Hidro-HE60	200k	60	51	1.7	30	4.5	250	4.8	0.45
Hidro-HE75	260k	75	65	2.3	35	6.0	300	6.4	0.6
Hidro-HE120	400k	120	100	6.0	50	8.0	360	11.8	1.1

