

Wed, Feb 24, 2016 @ 12:04 PM

Recommended Dealer:

Requested By:

Helen Bernardi

Group:

Miami FL
United States

Recommended Heat Siphon System:

M.S.R.P.: \$ 2,995.00

Model : C200HP Qty:1

Heating Capacity Used: 40%

INPUT SECTION

HSA.Bernardi_2-9-2016.pdf

Heating Season - All Year

Pool/Spa Location:	Outdoor		Pool/ Spa Data				Pool/Spa Type: Pool					
	POOL	SPA	Units				FILTRATION					
Surface Area:	450		SQFT				Pump Hrs/Day: 24					
Water Volume:	15,000		Gallons				Pump Size: 1 HP					
Desired Water Temp:	84						Solar Panels (Sq. Ft.)= 0					
Amount of Shade @Noon:	0%						Efficiency= 75%			Included: YES		
Wind @Water Surface:	2.50											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Days Pool Heated:	31	28	31	30	31	30	31	31	30	31	30	31
Days Spa Heated:	31	28	31	30	31	30	31	31	30	31	30	31
Hrs/Day Pool Covered:	18	18	18	18	18	18	18	18	18	18	18	18
Hrs/Day Spa Covered:	23	23	23	23	23	23	23	23	23	23	23	23
Days Heat Siphon Avail.	31	28	31	30	31	30	31	31	30	31	30	31

Local Fuel and Heater Cost Data in \$ US Dollars (1 US \$ =

	Local Fuel Cost	Cost/KWH	Breakeven	Heater Cost	Efficiency	Life Cycle
Electric Resistance	\$0.11 per Kw-Hr	\$0.11	COP	\$1,500	100%	5 Year
Propane (LP) Gas	\$3.83 per	\$0.22	0.50	\$2,000	65%	5 Year
Fuel Oil	\$3.38 per	\$0.13	0.87	\$3,000	65%	5 Year
Natural Gas	\$1.91 per Therm	\$0.08	1.37	\$2,000	80%	5 Year
HEAT SIPHON	\$0.11 per Kw-Hr	\$0.11	-	\$2,995	400 - 700%	12 Year

Local Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Air Temp °F	66.9	67.9	70.5	74.2	77.6	80.8	81.8	82.3	81.3	77.8	72.4	68.1
% Clear Sky	66	72	73	73	68	61	65	57	62	62	64	65
Solar Gain, Langley	349	415	489	540	553	532	532	505	440	384	353	316
Relative Humidity %	72	71	67	66	72	76	76	78	80	75	70	69
Water Vapor Press. psia	0.210	0.204	0.285	0.288	0.303	0.441	0.447	0.479	0.418	0.340	0.260	0.237

EXECUTIVE SUMMARY

Total Pool / Spa Heat Loss (Heat Req'd to Maintain Desired Water Temperature)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
KWH	3,234	2,003	341	0	0	0	0	0	0	0	1,786	3,145	10,509
BTU/Hr	14,845	10,178	1,567	0	0	0	0	0	0	0	8,469	14,435	49,494

Monthly Heater Fuel Cost

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Cost/Yr
Electric Resist.	\$360	\$223	\$38	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$199	\$350	\$1,170
Propane (LP)	\$714	\$442	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$394	\$694	\$1,349
Fuel Oil	\$415	\$257	\$44	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$229	\$404	\$2,319
Natural Gas	\$263	\$163	\$28	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$145	\$256	\$856
HEAT SIPHON	\$79	\$49	\$8	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42	\$77	\$255

MONTHLY SAVINGS using HEAT SIPHON vs. Other Fuels

ANNUAL SAVINGS

HEAT SIPHON vs.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	ANNUAL SAVINGS
Electric Resist.	\$360	\$223	\$38	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$199	\$350	\$915
Propane/LP Gas	\$714	\$442	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$394	\$694	\$2,064
Fuel Oil	\$415	\$257	\$44	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$229	\$404	\$1,094
Natural Gas	\$263	\$163	\$28	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$145	\$256	\$601

1 HP Filtration Pump Operating Cost

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Cost/Yr
Scheduled Hrs	744	672	744	720	744	720	744	744	720	744	720	744	
Electric Cost	\$62	\$56	\$62	\$60	\$62	\$60	\$62	\$62	\$60	\$62	\$60	\$62	\$726
Extra Heating Hrs	0	0	0	0	0	0	0	0	0	0	0	0	
Extra Pump Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

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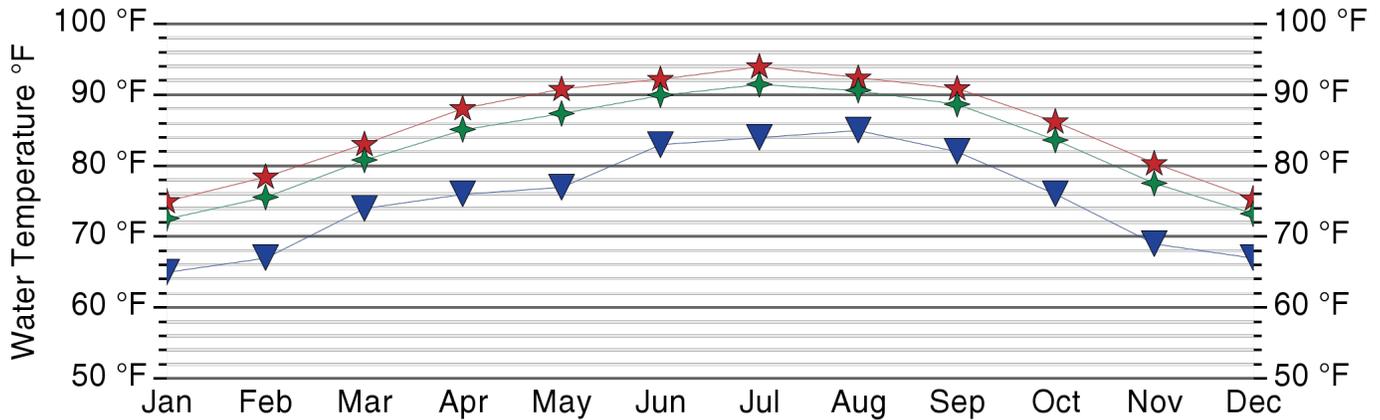
The following data and graph shows the normal pool water temperature an unheated pool will reach using the specified location, shade, wind & weather data

UNHEATED POOL TEMPERATURE

Location: Miami ,FL

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
100% Covered (24/7)	75	78	83	88	91	92	94	92	91	86	80	75
Covered per Analysis	73	76	81	85	87	90	92	91	89	84	78	73
No Cover	65	67	74	76	77	83	84	85	82	76	69	67
Hrs/day Pool Covered	18	18	18	18	18	18	18	18	18	18	18	18

▼ NO Cover
 ◆ Covered per Analysis
 ★ 100% Covered



HEAT SIPHON® RUNTIME

Owner: Helen Bernardi

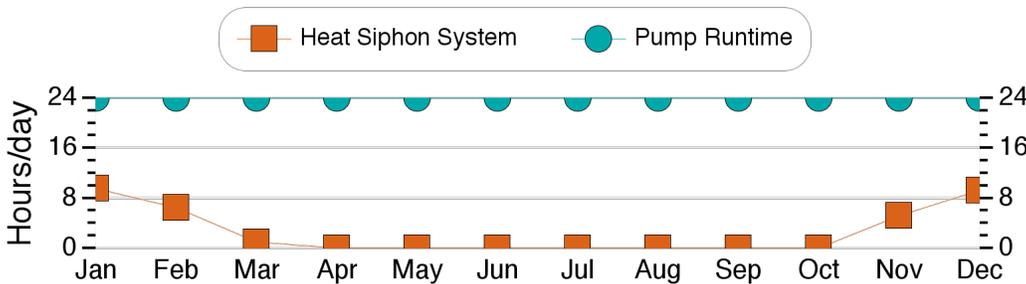
Location: Miami ,FL

Pool Area: 450

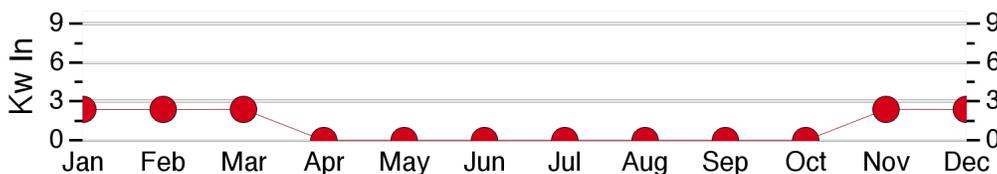
Spa Area: 50

Heat Siphon®:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
System Runtime Hrs/Day	9.5	6.5	1.0								5.2	9.2
% of Heating Capacity Used	40%	27%	4%								22%	39%
Total Kilowatts Input	2.41	2.41	2.42								2.42	2.41

Heat Siphon® System Runtime Hours / Day



Heat Siphon® System Maximum Kilowatt Input



Heat Siphon Systems Models / Options

Model Selected	Qty Req'd.	System MSRP
C200HP	1	\$2,995
Z200HP	1	\$3,195
C375HP	1	\$3,995
Z375HP	1	\$4,195
C575HP	1	\$4,495
Z575HP	1	\$4,695
Z700HP	1	\$5,795

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HEAT SIPHON® Operating Cost Comparison

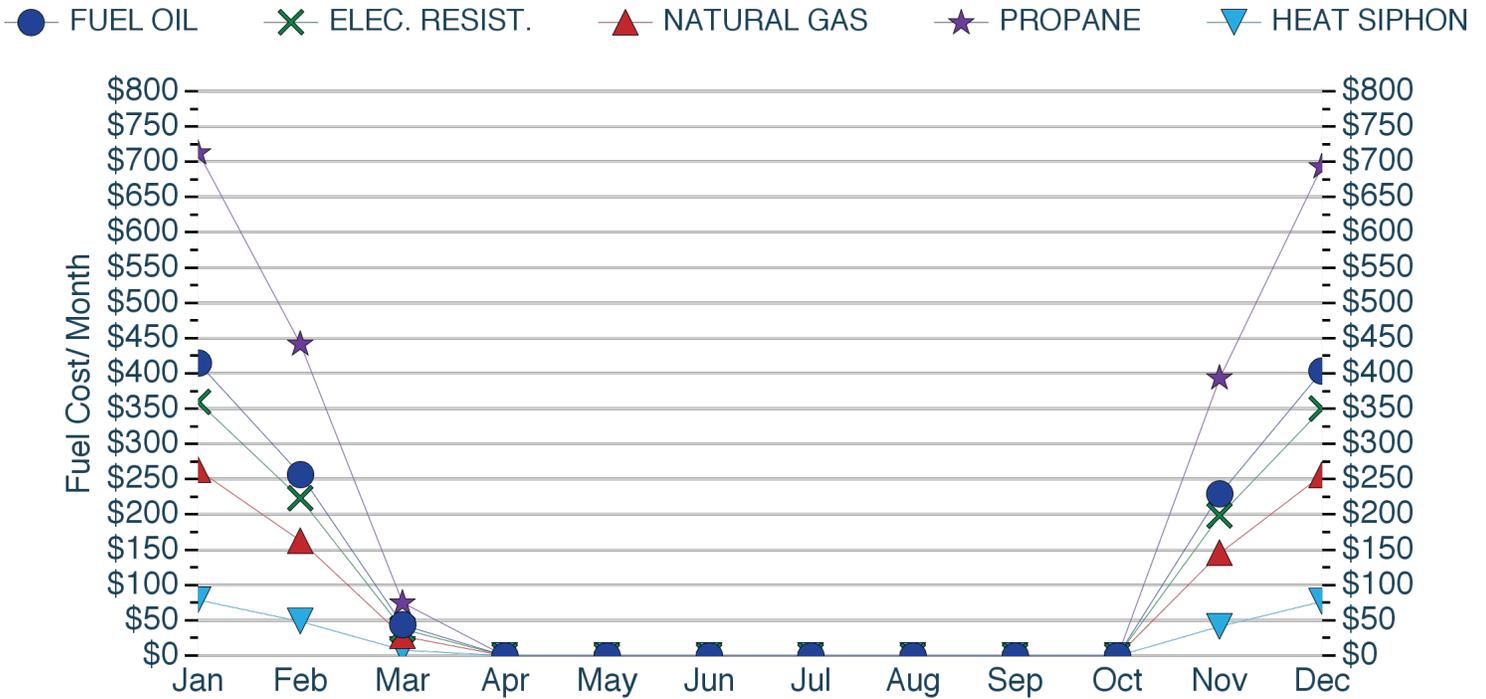
Owner: Helen Bernardi

Location: Miami ,FL

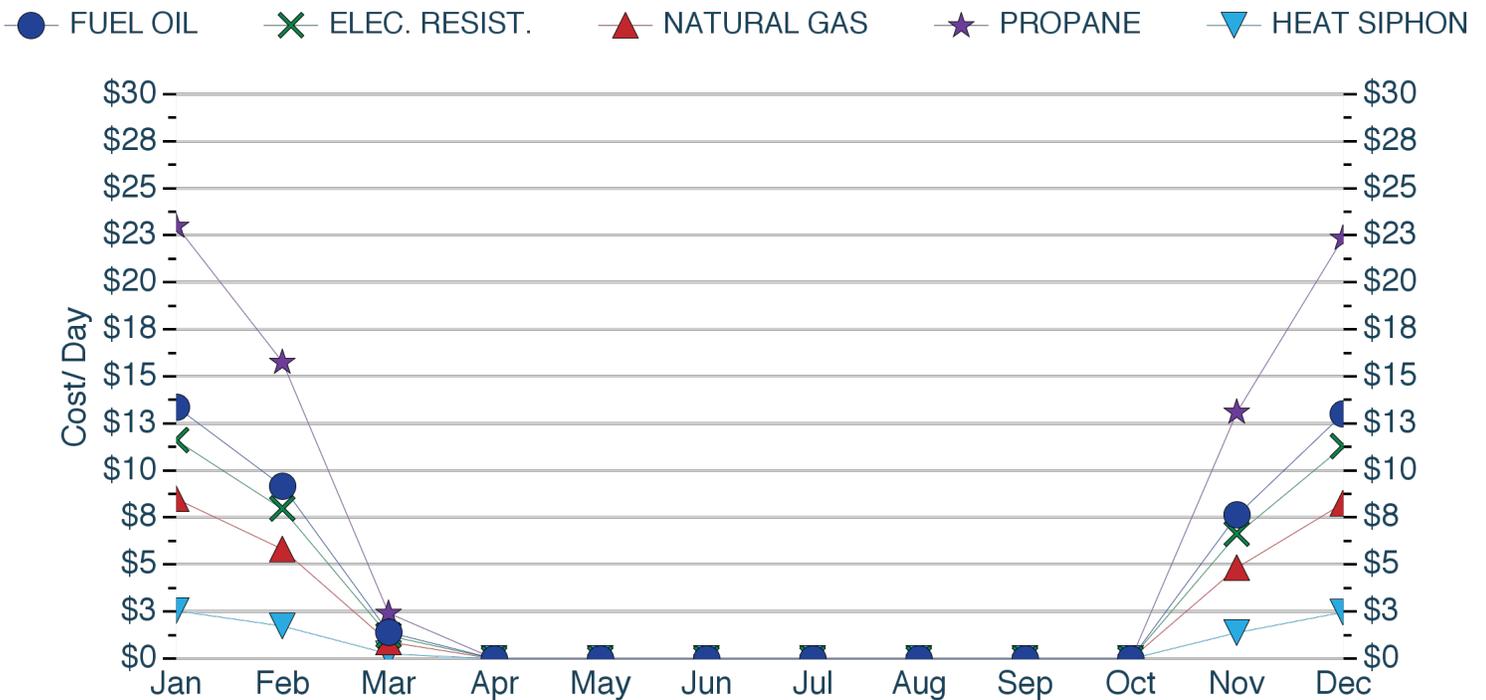
Pool Area: 450

Spa Area: 50

MONTHLY OPERATING COST by Heater Type

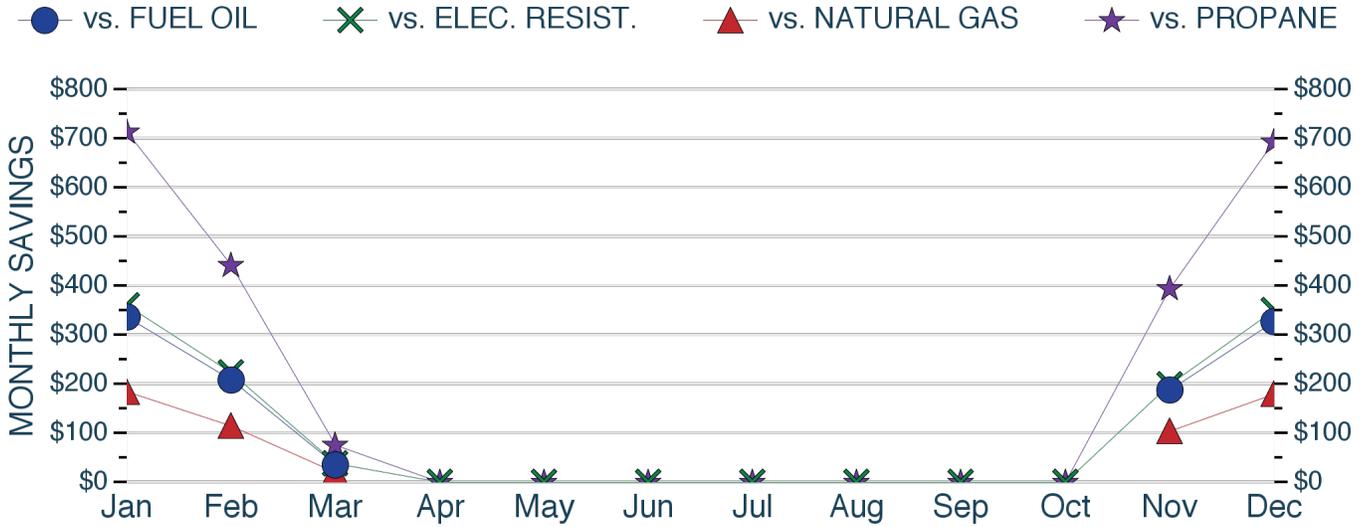


Fuel Cost per Day



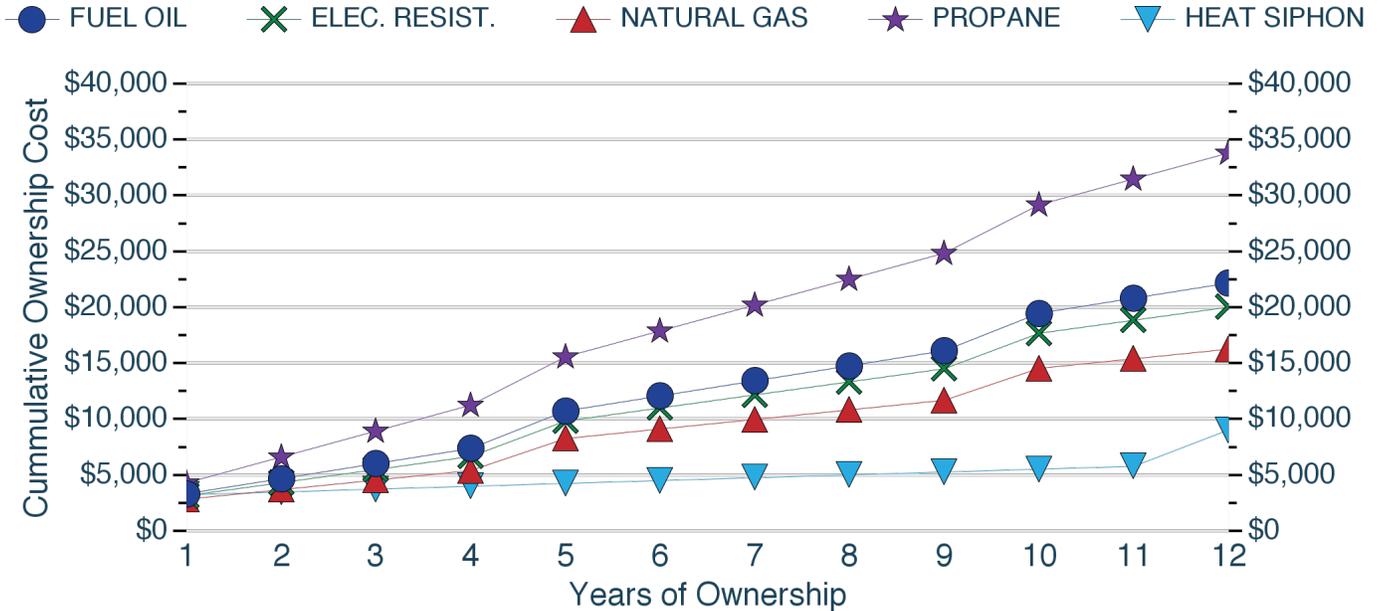
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MONTHLY FUEL COST SAVINGS using HEAT SIPHON vs other heaters



BREAK-EVEN ANALYSIS vs HEAT SIPHON System

The chart below shows the TOTAL CUMMULATIVE HEATING COST by Heater Type including purchase cost + the YEARLY FUEL COST + replacement cost. No other costs (maintenance etc.) are included. Replacement cost the heater is added in the season which Life Expectancy runs out:



CUMMULATIVE COST OF OWNERSHIP *

YEAR	1	2	3	4	5	6	7	8	9	10	11	12
Electric Resist.	\$3,170	\$4,339	\$5,509	\$6,678	\$9,848	\$11,018	\$12,187	\$13,357	\$14,527	\$17,696	\$18,866	\$20,035
Propane (LP)	\$4,319	\$6,637	\$8,956	\$11,274	\$15,593	\$17,912	\$20,230	\$22,549	\$24,867	\$29,186	\$31,505	\$33,823
Fuel Oil	\$3,349	\$4,698	\$6,047	\$7,396	\$10,745	\$12,095	\$13,444	\$14,793	\$16,142	\$19,491	\$20,840	\$22,189
Natural Gas	\$2,856	\$3,712	\$4,568	\$5,424	\$8,280	\$9,136	\$9,992	\$10,848	\$11,705	\$14,561	\$15,417	\$16,273
HEAT SIPHON	\$3,250	\$3,505	\$3,759	\$4,014	\$4,269	\$4,524	\$4,778	\$5,033	\$5,288	\$5,543	\$5,797	\$9,047

*Purchase cost + fuel cost + replacement cost